Inventor Search

=> d ibib abs l1 1-2

L1 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:609852 HCAPLUS
DOCUMENT NUMBER: 139:154974
TITLE: Compositions and methods for forming and strengthening bone
INVENTOR(S): **Marchosky, J. Alexander**
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 16 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003147860	A1	20030807	US 2002-71490	20020207
PRIORITY APPLN. INFO.:			US 2002-71490	20020207

AB Compns. are provided which stimulate bone growth. Also provided are methods for utilizing the compns. for filling in bone defects, promoting rapid fusion of bone fractures, grafts, and bone-prostheses, and promoting strengthening of osteoporotic bones. The appearance of bone formation at the site of bone defect in rat's femur was shown after application of a composition containing demineralized bone matrix, hyaluronic acid, and purified vascular endothelial growth factor at 12 wk.

L1 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:12589 HCAPLUS
DOCUMENT NUMBER: 134:76442
TITLE: Compositions containing growth factors and methods for forming and strengthening bone
INVENTOR(S): **Marchosky, J. Alexander**
PATENT ASSIGNEE(S): USA
SOURCE: PCT Int. Appl., 41 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001000792	A1	20010104	WO 2000-US17955	20000629
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2377435	AA	20010104	CA 2000-2377435	20000629
US 6372257	B1	20020416	US 2000-606768	20000629
EP 1203074	A1	20020508	EP 2000-943309	20000629
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
AU 782394	B2	20050721	AU 2000-57799	20000629

PRIORITY APPLN. INFO.: US 1999-141386P P 19990629
WO 2000-US17955 W 20000629

AB Compns. for stimulating bone growth comprise (a) growth factors, (b) demineralized, non-decalcified bone matrix, (c) a scaffolding material selected from cancelous bone, chitosan, chitosan-protein, and chitosan-protein fibers, and (d) a gel material selected from chitosan and its derivs., alginate, or hyaluronic acid. Addnl., compns. may contain angiogenesis-stimulating materials and osteoinductive materials. Methods for utilizing the compns. for filling in bone defects, promoting rapid fusion of bone fractures, grafts, and bone-prostheses, and promoting strengthening of osteoporotic bones are also provided. For example, bone formation at the site of bone defect was observed 12 wk after the application of the composition containing demineralized bone matrix, hyaluronic acid, and vascular endothelial growth factor.

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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=> d his ful

     (FILE 'HOME' ENTERED AT 17:21:18 ON 13 APR 2006)

     FILE 'HCAPLUS' ENTERED AT 17:22:38 ON 13 APR 2006
                E MARCHOSKY J ALEX/AU
L1            2 SEA ABB=ON  "MARCHOSKY J ALEXANDER"/AU
L2              ANALYZE L1 1-2 CT :      13 TERMS

     FILE 'REGISTRY' ENTERED AT 17:25:36 ON 13 APR 2006
                E HYALURONIC ACID/CN
L3            1 SEA ABB=ON  "HYALURONIC ACID"/CN

     FILE 'HCAPLUS' ENTERED AT 17:25:54 ON 13 APR 2006
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L6           10 SEA ABB=ON  L5 AND ?ALLOGRAFT?
L7           23 SEA ABB=ON  L4 AND (?BONE?(3A)?FORM?)(5A)?INDUC?
L8           33 SEA ABB=ON  L6 OR L7
L9           20 SEA ABB=ON  L8 AND (?GROW? OR ?STRENGTH?)
L10          33 SEA ABB=ON  L8 OR L9
L11          16 SEA ABB=ON  L10 AND (PRD<19990629 OR PD<19990629)
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     FILE 'MEDLINE, BIOSIS, EMBASE, JAPIO, JICST-EPLUS' ENTERED AT 17:30:50 ON
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L12          12 SEA ABB=ON  L11
L13           6 DUP REMOV L12 (6 DUPLICATES REMOVED)  6 cits from

     FILE 'USPATFULL' ENTERED AT 17:34:33 ON 13 APR 2006
L14         215 SEA ABB=ON  L10 AND (PRD<19990629 OR PD<19990629)
L15         215 SEA ABB=ON  L14 AND (?GROW? OR ?STRENGTH?)
L16          40 SEA ABB=ON  L15 AND ?ALLOGRAFT?
L17          40 SEA ABB=ON  L16 AND ?FORM?   40 cits from USPatFull

     FILE HOME

     FILE HCAPLUS

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     FILE COVERS 1907 - 13 Apr 2006  VOL 144 ISS 16
     FILE LAST UPDATED: 12 Apr 2006  (20060412/ED)

     New CAS Information Use Policies, enter HELP USAGETERMS for details.

      This file contains CAS Registry Numbers for easy and accurate
      substance identification.

     FILE REGISTRY
     Property values tagged with IC are from the ZIC/VINITI data file
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STRUCTURE FILE UPDATES: 11 APR 2006 HIGHEST RN 880129-32-8
DICTIONARY FILE UPDATES: 11 APR 2006 HIGHEST RN 880129-32-8

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

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* *
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
* *
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Structure search iteration limits have been increased. See HELP SLIMITS for details.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

FILE MEDLINE
FILE LAST UPDATED: 12 APR 2006 (20060412/UP). FILE COVERS 1950 TO DATE.

On December 11, 2005, the 2006 MeSH terms were loaded.

The MEDLINE reload for 2006 is now (26 Feb.) available. For details on the 2006 reload, enter HELP RLOAD at an arrow prompt (=>). See also:

http://www.nlm.nih.gov/mesh/
http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_med_data_changes.html
http://www.nlm.nih.gov/pubs/techbull/nd05/nd05_2006_MeSH.html

OLDMEDLINE is covered back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2006 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE BIOSIS
FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 12 April 2006 (20060412/ED)

FILE EMBASE
FILE COVERS 1974 TO 13 Apr 2006 (20060413/ED)

EMBASE has been reloaded. Enter HELP RLOAD for details.

EMBASE is now updated daily. SDI frequency remains weekly (default) and biweekly.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE JAPIO
FILE LAST UPDATED: 3 APR 2006 <20060403/UP>
FILE COVERS APRIL 1973 TO DECEMBER 22, 2005

>>> GRAPHIC IMAGES AVAILABLE <<<

>>> NEW IPC8 DATA AND FUNCTIONALITY NOT YET AVAILABLE IN THIS FILE. USE IPC7 FORMAT FOR SEARCHING THE IPC. WATCH THIS SPACE FOR FURTHER DEVELOPMENTS AND SEE OUR NEWS SECTION FOR FURTHER INFORMATION ABOUT THE IPC REFORM <<<

FILE JICST-EPLUS
FILE COVERS 1985 TO 11 APR 2006 (20060411/ED)

THE JICST-EPLUS FILE HAS BEEN RELOADED TO REFLECT THE 1999 CONTROLLED TERM (/CT) THESAURUS RELOAD.

FILE USPATFULL
FILE COVERS 1971 TO PATENT PUBLICATION DATE: 13 Apr 2006 (20060413/PD)
FILE LAST UPDATED: 13 Apr 2006 (20060413/ED)
HIGHEST GRANTED PATENT NUMBER: US7028340
HIGHEST APPLICATION PUBLICATION NUMBER: US2006080750
CA INDEXING IS CURRENT THROUGH 13 Apr 2006 (20060413/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 13 Apr 2006 (20060413/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Feb 2006
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Feb 2006

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L3            1 SEA FILE=REGISTRY ABB=ON  "HYALURONIC ACID"/CN
L4        16360 SEA FILE=HCAPLUS ABB=ON  L3 OR ?HYALURONIC?(W)?ACID?
L5           65 SEA FILE=HCAPLUS ABB=ON  L4 AND (?CANCEL? OR ?DEMINERAL? OR
                 NON(W)?DECALC?)(5A)?BONE?
L6           10 SEA FILE=HCAPLUS ABB=ON  L5 AND ?ALLOGRAFT?
L7           23 SEA FILE=HCAPLUS ABB=ON  L4 AND (?BONE?(3A)?FORM?)(5A)?INDUC?
L8           33 SEA FILE=HCAPLUS ABB=ON  L6 OR L7
L9           20 SEA FILE=HCAPLUS ABB=ON  L8 AND (?GROW? OR ?STRENGTH?)
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L11          16 SEA FILE=HCAPLUS ABB=ON  L10 AND (PRD<19990629 OR PD<19990629)

=> d ibib abs l11 1-16

L11  ANSWER 1 OF 16  HCAPLUS  COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER:         2006:138967  HCAPLUS
DOCUMENT NUMBER:          144:199025
TITLE:                    Demineralized corticocancellous
                          bone sheet
INVENTOR(S):              Sunwoo, Moon Hae; Gertzman, Arthur A.; Stroever, Bruce
                          W.
PATENT ASSIGNEE(S):       Musculoskeletal Transplant Foundation, USA
SOURCE:                   U.S., 9 pp., Cont.-in-part of U.S. Ser. No. 413,815.
                          CODEN: USXXAM
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   10
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
     ---------------      ----   --------    --------------------    --------
     US 6998135            B1    20060214    US 2001-853761          20010514 <--
     US 6030635            A     20000229    US 1998-31750           19980227
     US 6326018            B1    20011204    US 1999-413815          19991007 <--
     EP 1477176            A1    20041117    EP 2004-77080           20000222
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, FI, CY
     AT 297766             E     20050715    AT 2000-301370          20000222
     ES 2241549            T3    20051101    ES 2000-301370          20000222
PRIORITY APPLN. INFO.:                       US 1998-31750       A1 19980227 <--
                                             US 1999-413815      A2 19991007
                                             EP 2000-301370      A3 20000222
AB   A flexible, demineralized unitary bone sheet comprised
     of cortical cancellous bone having a residual calcium
     weight of 3.0% to 8.0% with a hyaluronic acid component
     having a mol. weight of 700,000 to 1,500,000 with the weight of the same
ranging
     from 1% to about 5% of the total sheet weight The bone sheet is adapted for
     use during the in vivo repair of a mammalian or animal skeletal system
     with the thickness of the cortical cancellous sheet ranging from 2.0 mm to
     about 8.0 mm. The bone sheet has sufficient flexibility to allow the
     sheet to be shaped to conform to the configuration of a skeletal region to
     be repaired and sufficient tensile strength to allow the sheet
     to be so shaped without damage to the sheet. Preparation of cortical strips
     from human femoral allograft tissue taken from a qualified donor
     is described.
REFERENCE COUNT:          17    THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS
                                RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11  ANSWER 2 OF 16  HCAPLUS  COPYRIGHT 2006 ACS on STN
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ACCESSION NUMBER: 2004:402760 HCAPLUS
DOCUMENT NUMBER: 140:380720
TITLE: Synthetic bone matrix implant comprising osteogenic protein 1 in a crosslinked collagen-glycosaminoglycan matrix
INVENTOR(S): Kuberasampath, Thangavel; Tarrant, Lawrence Berlowitz
PATENT ASSIGNEE(S): Stryker Corp., USA
SOURCE: U.S. Pat. Appl. Publ., 10 pp., Cont. of U.S. Ser. No. 104,865.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002151985	A1	20021017	US 2001-882875	20010615 <--
US 6605117	B2	20030812		
AU 639574	B2	19930729	AU 1991-79614	19910522 <--
JP 06505642	T2	19940630	JP 1991-510269	19910522 <--
EP 608211	A1	19940803	EP 1991-911588	19910522 <--
EP 608211	B1	19951227		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
AT 132043	E	19960115	AT 1991-911588	19910522 <--
ES 2081484	T3	19960301	ES 1991-911588	19910522 <--
CA 2082946	C	19961210	CA 1991-2082946	19910522 <--
PRIORITY APPLN. INFO.:			US 1990-529852 A3	19900529 <--
			US 1995-443676 A1	19950518 <--
			US 1998-104865 A1	19980625 <--
			WO 1991-US3603 A	19910522 <--

AB Disclosed is an osteogenic device capable of **inducing** the **formation** of endochondral **bone** in a shape **conforming** substantially to the shape of the device when implanted in a mammalian host. The device includes an osteogenic protein (OP1) dispersed within a porous matrix comprising a polymer of collagen and glycosaminoglycan crosslinked to an Mc value of about 800 to about 60,000. Also disclosed are a method of inducing mammalian bone **growth**, and a method of inducing conductive bone **growth** from viable mammalian bone.

L11 ANSWER 3 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:1004372 HCAPLUS
DOCUMENT NUMBER: 140:8875
TITLE: Assembled implant including mixed-composition segment
INVENTOR(S): Bianchi, John R.; Mills, C. Randal; Gorham, P. J.; Esch, Michael; Carter, Kevin C.; Coleman, Pat; Ross, Kevin; Rambo, Harry W.; Jones, Darren G.; Buskirk, Dayna; Donda, Russell S.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 36 pp., Cont.-in-part of U.S. Appl. 2001 31,254.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 11
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

US 2002106393	A1	20020808	US 2001-941154	20010827
US 2001031254	A1	20011018	US 2001-782594	20010212 <--
CA 2437763	AA	20020822	CA 2001-2437763	20010907
WO 2002064180	A1	20020822	WO 2001-US27683	20010907
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1359950	A1	20031112	EP 2001-968600	20010907
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2005510258	T2	20050421	JP 2002-563972	20010907
US 2004115172	A1	20040617	US 2002-387322	20021223 <--

PRIORITY APPLN. INFO.:	US 2000-181622P	P 20000210
	US 2001-782594	A2 20010212
	US 1998-191132	A2 19981113 <--
	US 1998-191232	A2 19981113 <--
	US 1999-363909	B1 19990728
	US 1999-370194	A1 19990809
	US 1999-378527	A2 19990820
	US 2000-481319	A1 20000111
	US 2000-528034	A1 20000317
	US 2000-DS123227	A1 20000512
	US 2001-941154	A 20010827
	WO 2001-US27683	W 20010907

AB This invention provides a method for manufacture of autograft, **allograft** and xenograft implants which comprises assembling such implants from smaller pieces of graft materials to form a larger graft implant product. One segment of an assembled graft implant is comprised of 2 or more discrete regions containing at least one synthetic segment and at least one **demineralized bone** segment and having distinct characteristics and/or properties. The synthetic segment is comprised of e.g., stainless steel, titanium, nylon, polycarbonate, polypropylene, polyacetal, PEG, polyvinylpyrolidone, polyacrylates, polyesters, and polysulfones.

L11 ANSWER 4 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:	2003:874783 HCAPLUS
DOCUMENT NUMBER:	139:354539
TITLE:	Malleable putty and flowable paste with **allograft** bone having residual calcium for filling bone defects
INVENTOR(S):	Gertzman, Arthur A.; Sunwoo, Moon H.
PATENT ASSIGNEE(S):	Musculoskeletal Transplant Foundation, USA
SOURCE:	U.S. Pat. Appl. Publ., 16 pp., Cont.-in-part of U.S. 6,437,018. CODEN: USXXCO
DOCUMENT TYPE:	Patent
LANGUAGE:	English
FAMILY ACC. NUM. COUNT:	10
PATENT INFORMATION:	

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003206937	A1	20031106	US 2001-983526	20011024 <--

US 6911212	B2	20050628		
US 6030635	A	20000229	US 1998-31750	19980227
EP 1477176	A1	20041117	EP 2004-77080	20000222
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
AT 297766	E	20050715	AT 2000-301370	20000222
ES 2241549	T3	20051101	ES 2000-301370	20000222
US 6437018	B1	20020820	US 2000-515656	20000229 <--
US 2002192263	A1	20021219	US 2002-150097	20020520 <--
PRIORITY APPLN. INFO.:			US 1998-31750 A2	19980227 <--
			US 1999-365880 B2	19990803
			US 2000-515656 A2	20000229
			EP 2000-301370 A3	20000222
			US 2001-983526 A2	20011024

AB The invention is directed toward a malleable bone putty and a flowable pastel composition for application to a bone defect site to promote new bone **growth** at the site which comprises a new **bone growth** inducing compound of partially **demineralized** lyophilized **allograft bone** material having a residual calcium content of 4-8% dry weight The bone powder has a particle size of 100-800 μ and is mixed in a high mol. weight hydrogel carrier containing a sodium phosphate saline buffer, the hydrogel component of the carrier at 1.00-50% of the composition and having a mol. weight of about at least 700,000 Daltons. The composition has a pH of 6.8-7.4 contains 25-35% bone powder and can be addnl. provided with BMP's. A malleable putty of 4% **hyaluronic acid** was prepared by mixing freeze dried **demineralized** cortical **allograft bone** of particle size of 100-800 μ with 146.6 g of a 4% solution of **hyaluronic acid** (mol. wt, 700,000 Daltons) in phosphate buffered saline. The bone component was added to achieve a bone concentration of approx. 32%. The solution was well mixed and allowed to stand for 2-3 h at room temperature This provides a malleable putty with a penetration unit of 66 and excellent formability properties and a pH of 7.0.

REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 5 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:748712 HCAPLUS
DOCUMENT NUMBER: 137:268501
TITLE: Malleable paste with **allograft** bone reinforcement for filling bone defects
INVENTOR(S): Gertzman, Arthur A.; Sunwoo, Moon Hae
PATENT ASSIGNEE(S): Musculoskeletal Transplant Foundation, USA
SOURCE: U.S., 11 pp., Cont.-in-part of U. S. Ser. No. 515,656. CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 10
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6458375	B1	20021001	US 2000-677891	20001003 <--
US 6030635	A	20000229	US 1998-31750	19980227
EP 1477176	A1	20041117	EP 2004-77080	20000222
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
AT 297766	E	20050715	AT 2000-301370	20000222
ES 2241549	T3	20051101	ES 2000-301370	20000222

US 6437018	B1	20020820	US 2000-515656	20000229 <--
US 2002061328	A1	20020523	US 2000-739214	20001219
US 6432436	B2	20020813		
CA 2357980	AA	20020403	CA 2001-2357980	20011002
CA 2357983	AA	20020403	CA 2001-2357983	20011002
WO 2002028322	A1	20020411	WO 2001-US27744	20011002
W: AU				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
WO 2002028332	A1	20020411	WO 2001-US27745	20011002
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RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
AU 2001094535	A5	20020415	AU 2001-94535	20011002
AU 783467	B2	20051027		
AU 2001094536	A5	20020415	AU 2001-94536	20011002
AU 782504	B2	20050804		
EP 1263365	A1	20021211	EP 2001-975183	20011002
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
US 6548080	B1	20030415	US 2002-124424	20020418

PRIORITY APPLN. INFO.:	US 1998-31750	A2 19980227 <--
	US 2000-515656	A2 20000229
	US 1999-365880	B2 19990803
	EP 2000-301370	A3 20000222
	US 2000-677891	A2 20001003
	US 2000-739214	A 20001219
	WO 2001-US27744	W 20011002
	WO 2001-US27745	W 20011002

AB The invention is directed toward a sterile malleable bone composition for application to a bone defect site to promote new bone **growth** at the site comprising a mixture of **demineralized** osteogenic **bone** powder with a particle size ranging from about 250 to about 750 μ and surface **demineralized** cortical **bone** rods having a diameter ranging from 1.0 mm to 5.00 mm or larger bone chips. The surface **demineralized** cortical **bone** rods have diameter to length ratio ranging from 1:2 to 1:20. The **demineralized** **bone** powder range from about 25 to about 30% of the weight of the composition and the cortical bone rods range from 5% to about 10% of the weight of the composition with the carrier being selected from the high mol. weight hydrogel, e.g., chitosan and sodium hyaluronate, in aqueous solution having a high mol. weight over 700,000 Dalton and ranging from about 2.0% to about 5.0% by weight of the carrier solution For example, to a malleable putty of 4% solution of **hyaluronic acid** (mol. weight of 1,000,000 Dalton) in phosphate buffered saline at a pH of about 7.2 and a 140,000 viscosity containing 15-30% by weight of cortical **allograft** bone powder (particle size of 250-750 μ) were added 5-25% mineralized bone chips (0.1-10 mm) and mineralized rods (0.1-10 mm) to obtain a paste.

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 6 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:637559 HCAPLUS

DOCUMENT NUMBER: 137:175008

TITLE: Assembled implants prepared from mixed-composition segments made of natural bone, alloys, and plastics

INVENTOR(S): Bianchi, John R.; Mills, Randal C.; Gorham, P. J.; Esch, Michael; Carter, Kevin C.; Coleman, Pat; Ross, Kevin; Rambo, Harry W.; Jones, Darren G.; Buskirk,

Dayna
PATENT ASSIGNEE(S): Regeneration Technologies, Inc., USA
SOURCE: PCT Int. Appl., 70 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 11
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002064180	A1	20020822	WO 2001-US27683	20010907
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2001031254	A1	20011018	US 2001-782594	20010212 <--
US 2002106393	A1	20020808	US 2001-941154	20010827
CA 2437763	AA	20020822	CA 2001-2437763	20010907
EP 1359950	A1	20031112	EP 2001-968600	20010907
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2005510258	T2	20050421	JP 2002-563972	20010907

PRIORITY APPLN. INFO.:

US 2001-782594	A	20010212
US 2001-941154	A	20010827
US 1998-191132	A2	19981113 <--
US 2000-181622P	P	20000210
WO 2001-US27683	W	20010907

AB A method for manufacture of autograft, **allograft** and xenograft bone implants comprises assembling such implants from smaller pieces of bone graft materials to form a larger graft implant product. One segment of an assembled graft implant is comprised of two or more discrete regions having distinct characteristics and/or properties. An assembled graft implant comprises individual segments fastened together, the segments being mineralized **bone, demineralized bone,** or a synthetic segment selected from alloys and plastic materials.

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 7 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:482945 HCAPLUS
DOCUMENT NUMBER: 137:52435
TITLE: Methods and articles for regenerating bone or periodontal tissue
INVENTOR(S): White, Charles F.; Flynn, Charles; Cook, Alonzo D.; Hardwick, William R.; Wikesjo, Ulf M. E.; Thomson, Robert C.
PATENT ASSIGNEE(S): USA
SOURCE: U.S., 37 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6409764	B1	20020625	US 1998-205150	19981203 <--
PRIORITY APPLN. INFO.:			US 1998-205150	19981203 <--

AB There are numerous medical situations involving deficiencies of living bone or periodontal tissue and where increase of living bone or periodontal tissue mass is desired. Methods are described wherein a configured, shell-like device that is capable of being penetrated by living cells and tissues, is implanted into the body of a mammal in such a way as to establish a space, the space being at least partly, bounded by the device. The configuration of the device is such that the configuration of the established space is essentially the same as the configuration of living bone or periodontal tissue that is desired for treatment of the tissue deficiency. At least one protein from the transforming **growth** factor-β (TGF-β) superfamily of proteins is placed within the established space for the purpose of stimulating the **growth** of living bone or periodontal tissue within the established space. A kit for the generation of living bone or periodontal tissue, comprised of the components mentioned above, is also disclosed. An example is given for periodontal regeneration with tissue exclusive and tissue penetrable devices containing TGF-β proteins and comprising PTFE devices.

REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 8 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:450194 HCAPLUS
DOCUMENT NUMBER: 137:24375
TITLE: Bone graft substitute composition containing calcium sulfate
INVENTOR(S): Petersen, Donald W.; Richelsoph, Kelly Coupe; Haggard, Warren Oliver; Hagan, Cary P.; Randolph, Donald A.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 8 pp., Cont.-in-part of U. S. Ser. No. 327,761.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002071827	A1	20020613	US 2001-915997	20010726 <--
US 2002110541	A1	20020815	US 2002-60697	20020130 <--
PRIORITY APPLN. INFO.:			US 1999-327761 A2	19990607 <--
			US 2001-915997 A1	20010726

AB A bone graft substitute composition essentially made of calcium sulfate, a mixing solution, and a plasticizing substance, i.e., a cellulose derivative is described. A **bone** graft substitute composition can include **demineralized bone** matrix and **cancellous bone**. For example, an injectable bone graft substitute composition was prepared containing 100 parts by weight of medical grade calcium sulfate hemihydrate, 11.1 parts by weight of CM-cellulose, 69.4 parts by weight of **demineralized bone** matrix, and 162 parts by weight of sterile water. The resultant injectable bone graft substitute composition was characterized by handability, ejectability, and robustness. The composition was well tolerated by the bone and healed a large medullary defect 30-100% at 6-20 wk with viable new bone in a canine bone defect model.

L11 ANSWER 9 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:909060 HCAPLUS
DOCUMENT NUMBER: 134:61583
TITLE: Collagen matrix and **growth** factors in non-immunogenic compositions for programming an organic matrix for remodeling into a target tissue
INVENTOR(S): Ashkar, Samy; Atala, Anthony
PATENT ASSIGNEE(S): Children's Medical Center Corp., USA
SOURCE: U.S., 10 pp., Cont.-in-part of U. S. Ser. No. 937,873.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6165487	A	20001226	US 1998-58048	19980409 <--
WO 9814222	A1	19980409	WO 1997-US17530	19970929 <--
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
WO 9952572	A1	19991021	WO 1999-US7742	19990408 <--
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9933875	A1	19991101	AU 1999-33875	19990408 <--
PRIORITY APPLN. INFO.:			US 1996-27123P	P 19960930 <--
			US 1997-937873	A2 19970929 <--
			WO 1997-US17530	A1 19970929 <--
			US 1998-58048	A 19980409 <--
			WO 1999-US7742	W 19990408 <--

AB Methods for programming a non-immunogenic matrix for remodeling into a target tissue are disclosed. Also disclosed are compns. containing demineralized collagen and a **growth** factor, e.g., osteopontin, which can promote the **growth** of selected tissue types in a subject. Methods for preparing the compns. are also described. The methods and compns. are useful for treatment of defects in tissues such as bone, cartilage, and muscle. For example, a bone-forming matrix was prepared by suspending **demineralized bone** in a physiol. saline solution with 0.1% osteopontin, 0.01% bone sialoprotein, and 0.1% of high-mol.-weight **hyaluronic acid** and drying. The bone-forming matrix provided new bone formation in bone defects. It is believed that the bone forming compns. of the invention provided results equal to, or superior to, the results seen with bone **allograft** treatment.

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 10 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:522637 HCAPLUS
DOCUMENT NUMBER: 133:109933
TITLE: Bone induction accelerator for treating fracture or bone deficiency
INVENTOR(S): Kawachi, Toshiyuki; Takahashi, Makoto; Shinomiya, Kenichi
PATENT ASSIGNEE(S): Tokyo Medical and Dental University, Japan
SOURCE: Jpn. Tokkyo Koho, 7 pp.
CODEN: JTXXFF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 3032824	B1	20000417	JP 1999-19712	19990128
JP 2000212204	A2	20000802		
EP 1044691	A2	20001018	EP 2000-250026	20000127 <--
EP 1044691	A3	20030611		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 2003064960	A1	20030403	US 2002-291658	20021112 <--
PRIORITY APPLN. INFO.:			JP 1999-19712 A	19990128 <--
			US 2000-492704 B3	20000127

AB Bone induction accelerator effective in treating fracture or bone deficiency contains glycosaminoglycan-lipid conjugates or their pharmaceutically acceptable salts. Glycosaminoglycan is selected from **hyaluronic acid**, chondroitin, chodroitinsulfate, chondroitin polysulfate, dermatan sulfate, heparin, keratin sulfate and keratin polysulfate and lipid is phosphatidylethanolamine.

L11 ANSWER 11 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2000:141482 HCAPLUS
DOCUMENT NUMBER: 132:185482
TITLE: Malleable paste for filling bone defects
INVENTOR(S): Gertzman, Arthur A.; Sunwoo, Moon Hae
PATENT ASSIGNEE(S): Musculoskeletal Transplant Foundation, USA
SOURCE: U.S., 7 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 10
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6030635	A	20000229	US 1998-31750	19980227
US 6326018	B1	20011204	US 1999-413815	19991007 <--
CA 2294686	AA	20010706	CA 2000-2294686	20000106 <--
CA 2294686	C	20050503		
EP 1127581	A1	20010829	EP 2000-301370	20000222 <--
EP 1127581	B1	20050615		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
EP 1477176	A1	20041117	EP 2004-77080	20000222
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY				
AT 297766	E	20050715	AT 2000-301370	20000222

ES 2241549	T3	20051101	ES 2000-301370	20000222	
US 6437018	B1	20020820	US 2000-515656	20000229	<--
US 6458375	B1	20021001	US 2000-677891	20001003	<--
US 6998135	B1	20060214	US 2001-853761	20010514	<--
US 2003206937	A1	20031106	US 2001-983526	20011024	<--
US 6911212	B2	20050628			
US 38522	E	20040525	US 2002-84090	20020228	<--
US 2002192263	A1	20021219	US 2002-150097	20020520	<--
US 2002197242	A1	20021226	US 2002-222807	20020819	<--
US 7019192	B2	20060328			
US 2004197373	A1	20041007	US 2004-828316	20040421	<--
PRIORITY APPLN. INFO.:			US 1998-31750	A3 19980227	<--
			US 1999-365880	B2 19990803	
			US 1999-413815	A2 19991007	
			EP 2000-301370	A3 20000222	
			US 2000-515656	A2 20000229	
			US 2001-983526	A2 20011024	
			US 2002-222807	A1 20020819	

AB The invention is directed toward a malleable bone putty and a flowable gel composition for application to a bone defect site to promote new bone **growth** at the site which comprises a new **bone growth** inducing compound of **demineralized** lyophilized **allograft bone** powder. The bone powder has a particle size ranging from about 100 to about 850 μ and is mixed in a high mol. weight hydrogel carrier, the hydrogel component of the carrier ranging from 0.3 to 3.0% of the composition and having a mol. weight of about at least 10,000 Daltons. The composition contains about 25% to about 40% bone powder and can be addnl. provided with BMP's and a sodium phosphate buffer. A malleable putty of 2% solution **hyaluronic acid** in isotonic saline with 250-420 μ cortical **allograft** bone powder at 30%. Freeze dried cortical **allograft** bone (502 mg) of particle size ranging 250-420 μ was mixed into 1170 mg of a 2% solution of sodium hyaluronate in isotonic saline. The bone component is added to achieve a bone concentration of 30% (weight/weight). The solution was well mixed and allowed to stand for 2-3 h at room temperature to provide a malleable putty with excellent formability properties.

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 12 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1998:548568 HCAPLUS
DOCUMENT NUMBER: 129:193756
TITLE: Matrix-free osteogenic devices, implants and methods of use thereof
INVENTOR(S): Rueger, David C.; Tucker, Marjorie M.
PATENT ASSIGNEE(S): Creative Biomolecules, Inc., USA
SOURCE: PCT Int. Appl., 79 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
WO 9834655	A1	19980813	WO 1998-US2159	19980205	<--
W: AU, CA, JP					

RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

CA 2280931	AA	19980813	CA 1998-2280931		19980205 <--
AU 9862677	A1	19980826	AU 1998-62677		19980205 <--
EP 957943	A1	19991124	EP 1998-904920		19980205 <--
EP 957943	B1	20030507			
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI					
JP 2001511042	T2	20010807	JP 1998-534870		19980205 <--
US 6281195	B1	20010828	US 1998-19339		19980205 <--
AT 239514	E	20030515	AT 1998-904920		19980205 <--
EP 1350525	A2	20031008	EP 2003-9751		19980205 <--
EP 1350525	A3	20031210			
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI					
US 2002091077	A1	20020711	US 2001-887901		20010622 <--
US 6426332	B2	20020730			
AU 779278	B2	20050113	AU 2001-97272		20011217 <--
PRIORITY APPLN. INFO.:			US 1997-37327P	P	19970207 <--
			US 1997-47909P	P	19970529 <--
			AU 1998-62677	A3	19980205 <--
			EP 1998-904920	A3	19980205 <--
			US 1998-19339	A1	19980205 <--
			WO 1998-US2159	W	19980205 <--

AB Provided herein are methods for **inducing bone formation** in a mammal sufficient to fill a defect defining a void, wherein osteogenic protein is provided alone or dispersed in a biocompatible non-rigid, amorphous carrier having no defined surfaces. The methods and devices provide injectable formulations for filling critical size defects, as well as for accelerating the rate and enhancing the quality of bone formation in non-critical size defects.

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 13 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:423960 HCAPLUS
DOCUMENT NUMBER: 122:230715
TITLE: Stimulation of osteoinduction in bone wound healing by high-molecular **hyaluronic acid**
AUTHOR(S): Sasaki, T.; Watanabe, C.
CORPORATE SOURCE: School of Dentistry, Showa University, Tokyo, 142, Japan
SOURCE: Bone (New York, NY, United States) (**1995**), 16(1), 9-15
CODEN: BONEDL; ISSN: 8756-3282
DOCUMENT TYPE: Journal
LANGUAGE: English

AB To study the osteoinductive action of **hyaluronic acid** (HA), we examined the effects of applying an elastoviscous high mol. HA preparation on bone wound healing after bone marrow ablation. The middiaphyses of cortical bones from rat femurs were perforated with a round bar, and excavated marrow cavities were filled immediately with high-mol. HA. Bone marrow ablation without HA was used to prepare controls. On post-ablation days 1, 2, 4, 7, and 14, animals were perfusion-fixed with an aldehyde mixture, and dissected femurs were examined by means of light, transmission-, and scanning-electron microscopy. In controls, the wounded marrow cavities were first filled with blood and fibrin clots (days 1 and 2), then with granulated tissues containing macrophages, neutrophils, and fibroblastic cells (day 4). New bone formation by differentiated osteoblasts was observed at 1 wk post-ablation; at 2 wk, the perforated cortical bones and marrow cavities were filled mostly with newly formed

trabecular bone. In bones to which HA had been applied, new **bone formation** already had been **induced** by day 4 on both the peri- and endosteal surfaces of the existing cortical bones. At 1 wk post-ablation, marrow cavities were completely filled with newly formed trabecular bones, in which active bone remodeling by osteoblasts and osteoclasts had occurred. Granulated tissues were replaced rapidly by normal marrow cells. These results suggest that high-mol. HA is capable of accelerating new bone formation through mesenchymal cell differentiation in bone wounds.

L11 ANSWER 14 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1995:244750 HCAPLUS
DOCUMENT NUMBER: 122:1863
TITLE: Osteogenic protein-1, a bone morphogenic protein member of the TGF-β superfamily, shares chemotactic but not fibrogenic properties with TGF-β
AUTHOR(S): Postlethwaite, Arnold E.; Raghow, Rajendra; Stricklin, George; Ballou, Leslie; Sampath, T. Kuber
CORPORATE SOURCE: Div. Connective Tissue Dis., Univ. Tennessee, Memphis, TN, 38163, USA
SOURCE: Journal of Cellular Physiology (**1994**), 161(3), 562-70
CODEN: JCLLAX; ISSN: 0021-9541
PUBLISHER: Wiley-Liss
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The authors have previously shown that recombinant human osteogenic protein-1 (rhOP-1), a bone morphogenetic protein member of the TGF-β superfamily, can **induce** new **bone formation** when implanted with an appropriate carrier at s.c. sites in rats and can restore completely large diaphyseal segmental defects in laboratory animals. The role of OP-1 in the early events of bone induction viz, chemotaxis of phagocytic leukocytes, and fibroblastic mesenchymal cells is currently unknown. In the present study, the authors examined the effect of rhOP-1 on chemotaxis of phagocytic leukocytes (human neutrophils and monocytes) and fibroblastic mesenchymal cells (infant foreskin fibroblasts). Since OP-1 is structurally related to TGF-β1, the authors assessed the effects of OP-1 on several other fibroblast functions (in addition to chemotaxis) known to be modulated by TGF-β1. The results demonstrated that rhOP-1, like TGF-β1, is a potent chemoattractant for human neutrophils, monocytes, and fibroblasts. However, in contrast to TGF-β1, OP-1 does not to stimulate fibroblast mitogenesis, matrix synthesis [collagen and **hyaluronic acid** (hyaluronan)], or production of tissue inhibitor of metalloproteinase (TIMP), i.e., fibroblast functions associated with fibrogenesis. These results clearly demonstrate a dichotomy between these two members of the TGF-β superfamily with regard to fibrogenic effects on fibroblasts but a similarity in their chemotactic properties.

L11 ANSWER 15 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1993:109744 HCAPLUS
DOCUMENT NUMBER: 118:109744
TITLE: Pharmaceutical formulations of osteogenic proteins
INVENTOR(S): Ron, Eyal; Turek, Thomas J.; Isaacs, Benjamin S.; Patel, Himakshi; Kenley, Richard A.
PATENT ASSIGNEE(S): Genetics Institute, Inc., USA
SOURCE: PCT Int. Appl., 26 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9300050	A2	19930107	WO 1992-US5309	19920622 <--
WO 9300050	A3	19930819		
W: AU, BR, CA, FI, JP, KR, NO, RU, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
AU 9222542	A1	19930125	AU 1992-22542	19920622 <--
AU 663328	B2	19951005		
EP 591392	A1	19940413	EP 1992-914339	19920622 <--
EP 591392	B1	19960911		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, SE				
JP 06508777	T2	19941006	JP 1993-501625	19920622 <--
JP 3351525	B2	20021125		
AT 142460	E	19960915	AT 1992-914339	19920622 <--
ES 2094359	T3	19970116	ES 1992-914339	19920622 <--
US 5597897	A	19970128	US 1993-81378	19930629 <--
NO 9304573	A	19931213	NO 1993-4573	19931213 <--
NO 307402	B1	20000403		
FI 109274	B1	20020628	FI 1993-5732	19931220 <--
PRIORITY APPLN. INFO.:			US 1991-718721 A	19910621 <--
			WO 1992-US5309 A	19920622 <--

AB Pharmaceutical formulations designed to sequester osteogenic proteins in situ for a time sufficient to allow the protein to **induce** cartilage and/or **bone formation** comprises an admixt. of an osteogenic protein, a matrix selected form the group consisting of poly(lactic acid), poly(glycolic acid), and lactic acid-glycolic acid copolymer, and an osteogenic protein-sequestering alkyl cellulose. The formulations provide malleable implants and can be used for repairing bone defects.

L11 ANSWER 16 OF 16 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 1986:32407 HCAPLUS
DOCUMENT NUMBER: 104:32407
TITLE: An electron microscopic demonstration of induction of chondrogenesis in neonatal rat muscle **outgrowth** cells in monolayer cultures
AUTHOR(S): Koskinen, Kari P.; Kanwar, Yasphal S.; Sires, Bryan; Veis, Arthur
CORPORATE SOURCE: Dent. Sch., Northwestern Univ., Chicago, IL, 60611, USA
SOURCE: Connective Tissue Research (**1985**), 14(2), 141-58
CODEN: CVTRBC; ISSN: 0300-8207
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Second-passage fibroblast-like cells **grown** from explants of neonatal fetus just before normal parturition) rat muscle continue to demonstrate fibroblastlike properties for many days when cultured on plastic surfaces. Such cells can be induced to change to a chondrocytelike mode of expression by the addition of effector materials prepared from bovine cortical bone decalcified with 0.6N HCl. Other studies show that similar demineralized bone particles and exts. from them have, in vivo, osteoinductive properties. Optimum conditions for this differentiation in monolayer culture were found in the use of 2% fetal calf serum with Dulbecco's modified Eagle medium. At 10% fetal calf serum the chondrogenic changes could not be detected. Light microscopy showed a

sequence of morphol. changes, after 36 h in culture, which resembled those seen at the beginning of osteogenesis in vivo. Induced cultures showed abundant extracellular proteoglycan production Isotope incorporation studies showed stimulation of glycosaminoglycan synthesis in response to effector materials in soluble form. Type II collagen could be detected after 3 days. Electron microscopic anal. of induced and control cultures showed unequivocal evidence for marked production of an extensive extracellular matrix in the region of effector particles. The cells themselves change shape and develop an abundant system of lysosomelike vesicles and a very active, highly engorged endoplasmic reticulum of Golgi apparatus After 9 days in culture, evidence for the formation of a ruthenium red-stained structure on the surface of the cells in contact with inductive particles, was observed The simple monolayer culture system described provides a direct means by which the presence of active chondrogenic fractions may be assessed, and in which the mechanism of action of the effectors can be studied.

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=> d que stat l13
L3 1 SEA FILE=REGISTRY ABB=ON "HYALURONIC ACID"/CN
L4 16360 SEA FILE=HCAPLUS ABB=ON L3 OR ?HYALURONIC?(W)?ACID?
L5 65 SEA FILE=HCAPLUS ABB=ON L4 AND (?CANCEL? OR ?DEMINERAL? OR NON(W)?DECALC?)(5A)?BONE?
L6 10 SEA FILE=HCAPLUS ABB=ON L5 AND ?ALLOGRAFT?
L7 23 SEA FILE=HCAPLUS ABB=ON L4 AND (?BONE?(3A)?FORM?)(5A)?INDUC?
L8 33 SEA FILE=HCAPLUS ABB=ON L6 OR L7
L9 20 SEA FILE=HCAPLUS ABB=ON L8 AND (?GROW? OR ?STRENGTH?)
L10 33 SEA FILE=HCAPLUS ABB=ON L8 OR L9
L11 16 SEA FILE=HCAPLUS ABB=ON L10 AND (PRD<19990629 OR PD<19990629)

L12 12 SEA L11
L13 6 DUP REMOV L12 (6 DUPLICATES REMOVED)

=> d ibib abs l13 1-6

L13 ANSWER 1 OF 6 EMBASE COPYRIGHT (c) 2006 Elsevier B.V. All rights reserved on STN
ACCESSION NUMBER: 97365781 EMBASE
DOCUMENT NUMBER: 1997365781
TITLE: Bone graft substitutes.
AUTHOR: Boyan B.D.; Nasatzky E.; Keller T.A.; Schwartz Z.
CORPORATE SOURCE: Dr. B.D. Boyan, Department of Orthopaedics, Univ. of Texas Health Science Center, 7703 Floyd Curl Drive, San Antonio, TX, 78284-7774, United States
SOURCE: Current Opinion in Orthopaedics, (**1997**) Vol. 8, No. 5, pp. 86-92. .
Refs: 33
ISSN: 1041-9918 CODEN: COORE
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; General Review
FILE SEGMENT: 033 Orthopedic Surgery
LANGUAGE: English
SUMMARY LANGUAGE: English
ENTRY DATE: Entered STN: 15 Jan 1998
Last Updated on STN: 15 Jan 1998
AB Bone graft substitutes span the range of processed **allograft** bone to synthetic materials and synthetic-biologic composites. During the past year, studies showed that there is considerable variability in the **bone**-inductive quality of **demineralized** freeze-dried **bone allografts**; the providers of these materials are working to find ways of ensuring quality by identifying donor characteristics that are responsible. New bone void fillers also became available. Calcium sulfate pellets were approved by the Food and Drug Administration for use in orthopedics in the United States. Among the new bone graft substitutes presented at the 1997 Orthopaedic Research Society meeting at the American Academy of Orthopedic Surgeons 1997 meeting (San Francisco, CA) were polylactic acid-polyglycolic acid scaffolds and a **hyaluronic acid**-basic fibroblast **growth** factor composite. Bone morphogenetic proteins continue to be studied both in animals and in humans. It is becoming clear that these factors may be most valuable for treatment of chronic nonunions and spine fusion. Scientists are also beginning to examine cell and gene therapies for promoting bone formation.

L13 ANSWER 2 OF 6 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 1996:279016 BIOSIS
DOCUMENT NUMBER: PREV199699001372
TITLE: Basic fibroblast **growth** factor for stimulation of **bone formation** in **osteoinductive** or conductive implants.
AUTHOR(S): Wang, Jian-Sheng
CORPORATE SOURCE: Dep. Orthopedics, Univ. Lund, Lund, Sweden
SOURCE: Acta Orthopaedica Scandinavica, (**1996**) Vol. 67, No. SUPPL. 269, pp. 1-33.
CODEN: AOSAAK. ISSN: 0001-6470.
DOCUMENT TYPE: Article
General Review; (Literature Review)
LANGUAGE: English
ENTRY DATE: Entered STN: 25 Jun 1996
Last Updated on STN: 25 Jun 1996

AB Basis Fibroblast **Growth** Factor (bFGF) is one of the endogenous factors found in bone matrix. bFGF is a mitogen for many cell types, including osteoblasts and chondrocytes. It can stimulate angiogenesis and osteoblast gene expression. The purpose of this study was to investigate whether exogenous bFGF can stimulate the formation of bone in bone grafts and in a bone graft substitute. In a model using demineralized bone matrix implants for bone induction, a dose of 15 ng bFGF per implant increased the number of chondrocytes and the amount of bone, whereas 1900 ng greatly inhibited cartilage and bone formation. These results are consistent with previous studies with this model, showing that a lower dose of bFGF increased bone calcium content and a higher dose reduced it. Thus, exogenous bFGF can stimulate proliferation during early phases of bone induction. A new device, the bone conduction chamber, was developed for the application of bFGF to bone conductive materials. This model made it possible to demonstrate a difference between the conductive properties of bone grafts and porous hydroxyapatite. bFGF increased bone **ingrowth** into bone graft inside the chamber and showed a biphasic dose-response curve, so that 98-200 ng per implant (0.4-10 ng/mm-3) increased bone **ingrowth**, but higher or lower doses had no effect. The same doses had the same effects in porous hydroxyapatite. In both bone grafts and porous hydroxyapatite, the highest dose still caused an increase in **ingrowth** of fibrous tissue. The effect on bone **ingrowth** was first detected after 6 weeks, regardless if administration of bFGF started at implantation or 2 weeks later, using an implanted minipump. Hyaluronate gel was effective as a slow-release carrier for bFGF. In conclusion, bFGF stimulates bone formation in bone implants, depending on dose and method for administration.

L13 ANSWER 3 OF 6 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 95260585 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7742090
TITLE: Stimulation of osteoinduction in bone wound healing by high-molecular **hyaluronic acid**.
AUTHOR: Sasaki T; Watanabe C
CORPORATE SOURCE: Department of Oral Anatomy, School of Dentistry, Showa University, Tokyo, Japan.
SOURCE: Bone, **(1995 Jan)** Vol. 16, No. 1, pp. 9-15.
Journal code: 8504048. ISSN: 8756-3282.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199506
ENTRY DATE: Entered STN: 19950621

Last Updated on STN: 19950621
Entered Medline: 19950613

AB To study the osteoinductive action of **hyaluronic acid** (HA), we examined the effects of applying an elastoviscous high-molecular HA preparation on bone wound healing after bone marrow ablation. The middiaphyses of cortical bones from rat femurs were perforated with a round bar, and excavated marrow cavities were filled immediately with high-molecular HA. Bone marrow ablation without HA was used to prepare controls. On post-ablation days 1, 2, 4, 7, and 14, animals were perfusion-fixed with an aldehyde mixture, and dissected femurs were examined by means of light, transmission-, and scanning-electron microscopy. In controls, the wounded marrow cavities were first filled with blood and fibrin clots (days 1 and 2), then with granulated tissues containing macrophages, neutrophils, and fibroblastic cells (day 4). New bone formation by differentiated osteoblasts was observed at 1 week post-ablation; at 2 weeks, the perforated cortical bones and marrow cavities were filled mostly with newly formed trabecular bone. In bones to which HA had been applied, new **bone formation** already had been **induced** by day 4 on both the peri- and endosteal surfaces of the existing cortical bones. At 1 week post-ablation, marrow cavities were completely filled with newly formed trabecular bones, in which active bone remodeling by osteoblasts and osteoclasts had occurred. Granulated tissues were replaced rapidly by normal marrow cells. These results suggest that high-molecular HA is capable of accelerating new bone formation through mesenchymal cell differentiation in bone wounds.

L13 ANSWER 4 OF 6 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 95051049 MEDLINE
DOCUMENT NUMBER: PubMed ID: 7962137
TITLE: Osteogenic protein-1, a bone morphogenic protein member of the TGF-beta superfamily, shares chemotactic but not fibrogenic properties with TGF-beta.
AUTHOR: Postlethwaite A E; Raghow R; Stricklin G; Ballou L; Sampath T K
CORPORATE SOURCE: Department of Medicine, University of Tennessee, Memphis 38163.
CONTRACT NUMBER: AR26034 (NIAMS)
AR39166 (NIAMS)
AR39682 (NIAMS)
SOURCE: Journal of cellular physiology, **(1994 Dec)** Vol. 161, No. 3, pp. 562-70.
Journal code: 0050222. ISSN: 0021-9541.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199412
ENTRY DATE: Entered STN: 19950110
Last Updated on STN: 19980206
Entered Medline: 19941227

AB We have previously shown that recombinant human osteogenic protein-1 (rhOP-1), a bone morphogenetic protein member of the TGF-beta superfamily, can **induce** new **bone formation** when implanted with an appropriate carrier at subcutaneous sites in rats and can restore completely large diaphyseal segmental defects in laboratory animals. The role of OP-1 in the early events of bone induction viz, chemotaxis of phagocytic leukocytes, and fibroblastic mesenchymal cells is currently unknown. In the present study, we examined the effect of rhOP-1 on chemotaxis of phagocytic leukocytes (human neutrophils and monocytes) and

fibroblastic mesenchymal cells (infant foreskin fibroblasts). Since OP-1 is structurally related to TGF-beta 1, we assessed the effects of OP-1 on several other fibroblast functions (in addition to chemotaxis) known to be modulated by TGF-beta 1. Our results demonstrated that rhOP-1, like TGF-beta 1, is a potent chemoattractant for human neutrophils, monocytes, and fibroblasts. However, in contrast to TGF-beta 1, OP-1 does not to stimulate fibroblast mitogenesis, matrix synthesis [collagen and **hyaluronic acid** (hyaluronan)], or production of tissue inhibitor of metalloproteinase (TIMP), i.e., fibroblast functions associated with fibrogenesis. These results clearly demonstrate a dichotomy between these two members of the TGF-beta superfamily with a regard to fibrogenic effects on fibroblasts but a similarity in their chemotactic properties.

L13 ANSWER 5 OF 6 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 93386043 MEDLINE
DOCUMENT NUMBER: PubMed ID: 8374499
TITLE: Bone density in old chickens' metaphyses, as affected by local trauma and chondrocyte implantation.
AUTHOR: Robinson D; Halperin N; Nevo Z
CORPORATE SOURCE: Department of Orthopaedic Surgery, Assaf Harofeh Medical Center, Zeriffin.
SOURCE: Bulletin (Hospital for Joint Diseases (New York, N.Y.)), **(1993 Spring)** Vol. 53, No. 1, pp. 83-7.
Journal code: 9215948. ISSN: 0018-5647.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199310
ENTRY DATE: Entered STN: 19931105
Last Updated on STN: 19931105
Entered Medline: 19931021

AB Resurfacing of joints by chondrocyte implants often leads to an increased subchondral bone density. To further evaluate this phenomenon, this study analyzed bone density and bone formation in three groups of 3-year-old chickens (90 animals, 30 per group): (1) implantation of chondrocytes embedded in **hyaluronic acid** (HA) into the tibial metaphysis; (2) implantation of delivery substance only; (3) sham-operated control group. Results were assessed biochemically, histologically, and histomorphometrically at 6 weeks and 6 months postimplantation. A 1.5-fold increase in the metaphyseal bone density was observed in the HA-implanted controls, as compared to sham-operated/normal joints. A further increase in bone density to twice the density of the sham-operated joints was achieved by implantation of chondrocytes. In bones implanted with cells, long-lasting (6 weeks) cartilage nodules were observed, which eventually underwent hypertrophy. The implanted chondrocytes were surrounded by a dense inflammatory infiltrate, which did not prevent the **induction** and **formation** of new **bone**. Based on these findings, it was concluded that chondrocyte implantation into bones results in an increase in local bone density due to a prolonged process of endochondral ossification. Further studies are necessary to evaluate the possible application of this implantation procedure in osteoporosis.

L13 ANSWER 6 OF 6 MEDLINE on STN DUPLICATE 4
ACCESSION NUMBER: 90367368 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2118436
TITLE: Bone morphogenetic protein-mediated interaction of periosteum and diaphysis. Citric acid and other factors influencing the generation of parosteal bone.

AUTHOR: Kubler N; Urist M R
CORPORATE SOURCE: Universitatsklinik u. Polikliniken f. Zahn-, Mund- u. Kieferkrankheiten, Wurzburg, Federal Republic of Germany.
CONTRACT NUMBER: DE02103 (NIDCR)
SOURCE: Clinical orthopaedics and related research, (1990 Sep) No. 258, pp. 279-94.
Journal code: 0075674. ISSN: 0009-921X.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 199010
ENTRY DATE: Entered STN: 19901109
Last Updated on STN: 19970203
Entered Medline: 19901005

AB In rabbits, after long-bone **growth** is complete and the cambium layer regresses, mesenchymal-type cells with embryonic potential (competence) for bone development persist in the adventitial layer of periosteum. These cells are not determined osteoprogenitor cells (stem cells) because bone tissue differentiation does not occur when adult periosteum is transplanted into a heterotopic site. In this respect, adventitial cells differ from bone marrow stroma cells. In a parosteal orthotopic site in the space between the adult periosteum and diaphysis, implants of bone morphogenetic protein (BMP) and associated noncollagenous proteins (BMP/NCP) induce adventitia and adjacent muscle connective-tissue-derived cells to switch from a fibrogenetic to a chondroosteoprogenetic pattern of bone development. The quantity of induced bone is proportional to the dose of BMP/NCP in the range from 10 to 50 mg; immature rabbits produced larger deposits than mature rabbits in response to BMP/NCP. Preoperative local intramuscular injections of citric, edetic, or **hyaluronic acids** in specified concentrations markedly enhanced subperiosteal BMP/NCP-**induced bone formation**. The quantity of bovine or human BMP/NCP-**induced bone formation** in rabbits is also increased by very low-dose immunosuppression but not by bone mineral, tricalcium phosphate ceramic, inorganic calcium salts, or various space-occupying, unspecific chemical irritants. Although composities of BMP/NCP and allogeneic rabbit tendon collagen increased the quantity of bone in a parosteal site, in a heterotopic site the composite failed to **induce bone formation**. In a parosteal site, the conditions permitting BMP/NCP-**induced bone formation** develop, and the end product of the morphogenetic response is a duplicate diaphysis. How BMP reactivates the morphogenetic process in postfetal mesenchymal-type adventitial cells persisting in adult periosteum (including adjacent muscle attachments) is not known.

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=> => d que stat l17
L3             1 SEA FILE=REGISTRY ABB=ON  "HYALURONIC ACID"/CN
L4         16360 SEA FILE=HCAPLUS ABB=ON  L3 OR ?HYALURONIC?(W)?ACID?
L5            65 SEA FILE=HCAPLUS ABB=ON  L4 AND (?CANCEL? OR ?DEMINERAL? OR
                 NON(W)?DECALC?)(5A)?BONE?
L6            10 SEA FILE=HCAPLUS ABB=ON  L5 AND ?ALLOGRAFT?
L7            23 SEA FILE=HCAPLUS ABB=ON  L4 AND (?BONE?(3A)?FORM?)(5A)?INDUC?
L8            33 SEA FILE=HCAPLUS ABB=ON  L6 OR L7
L9            20 SEA FILE=HCAPLUS ABB=ON  L8 AND (?GROW? OR ?STRENGTH?)
L10           33 SEA FILE=HCAPLUS ABB=ON  L8 OR L9
L14          215 SEA FILE=USPATFULL ABB=ON  L10 AND (PRD<19990629 OR PD<19990629
                 )
L15          215 SEA FILE=USPATFULL ABB=ON  L14 AND (?GROW? OR ?STRENGTH?)
L16           40 SEA FILE=USPATFULL ABB=ON  L15 AND ?ALLOGRAFT?
L17           40 SEA FILE=USPATFULL ABB=ON  L16 AND ?FORM?

=> d ibib abs l17 1-40

L17  ANSWER 1 OF 40  USPATFULL on STN
ACCESSION NUMBER:        2005:326442  USPATFULL
TITLE:                   Matrix protein compositions for grafting
INVENTOR(S):             Lyngstadaas, St.ang.le Petter, Nesoddtangen, NORWAY
                         Gestrelius, STina, Lund, SWEDEN
PATENT ASSIGNEE(S):      Biora BioEx AB, Malmo, SWEDEN (non-U.S. corporation)

                              NUMBER       KIND    DATE
                         ---------------- ------ --------
PATENT INFORMATION:      US 6979670         B1   20051227
APPLICATION INFO.:       US 2000-521907           20000309  (9)

                               NUMBER        DATE
                         ------------------ --------
PRIORITY INFORMATION:    DK 1999-337        19990310                  <--
                         US 1999-134954P    19990519 (60)             <--
DOCUMENT TYPE:           Utility
FILE SEGMENT:            GRANTED
PRIMARY EXAMINER:        Saunders, David
LEGAL REPRESENTATIVE:    Kudirka & Jobse, LLP
NUMBER OF CLAIMS:        23
EXEMPLARY CLAIM:         1
NUMBER OF DRAWINGS:      6 Drawing Figure(s); 6 Drawing Page(s)
LINE COUNT:              1227
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB     Enamel matrix, enamel matrix derivatives and/or enamel matrix proteins
       are used in the preparation of a pharmaceutical composition for
       promoting the take of a graft, e.g. in soft tissue such as skin or
       mucosa or mineralized tissue such as bone.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17  ANSWER 2 OF 40  USPATFULL on STN
ACCESSION NUMBER:        2005:177362  USPATFULL
TITLE:                   Adipose-derived stem cells and lattices
INVENTOR(S):             Katz, Adam, Charlottesville, VA, UNITED STATES
                         Llull, Ramon, Mallorca, SPAIN
                         Futrell, J. William, Pittsburgh, PA, UNITED STATES
                         Hedrick, Marc H., Encinitas, CA, UNITED STATES
                         Benhaim, Prosper, Encino, CA, UNITED STATES
                         Lorenz, Hermann Peter, Belmont, CA, UNITED STATES
```

Zhu, Min, San Diego, CA, UNITED STATES
Zuk, Patricia, Venice, CA, UNITED STATES
Ashjian, Peter H., New York, NY, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005153442	A1	20050714
APPLICATION INFO.:	US 2004-845315	A1	20040512 (10)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 2003-651564, filed on 29 Aug 2003, PENDING Continuation-in-part of Ser. No. US 2001-952522, filed on 10 Sep 2001, ABANDONED Continuation-in-part of Ser. No. US 2001-936665, filed on 10 Sep 2001, GRANTED, Pat. No. US 6777231 A 371 of International Ser. No. WO 2000-US6232, filed on 10 Mar 2000

	NUMBER	DATE	
PRIORITY INFORMATION:	US 1999-123711P	19990310 (60)	<--
	US 1999-162462P	19991029 (60)	

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: MANDEL & ADRIANO, 55 SOUTH LAKE AVENUE, SUITE 710, PASADENA, CA, 91101, US
NUMBER OF CLAIMS: 21
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 84 Drawing Page(s)
LINE COUNT: 9138
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides adipose-derived stem cells (ADSCs), adipose-derived stem cell-enriched fractions (ADSC-EF) and adipose-derived lattices, alone and combined with the ADSCs of the invention. In one aspect, the present invention provides an ADSC substantially free of adipocytes and red blood cells and clonal populations of connective tissue stem cells. The ADSCs can be employed, alone or within biologically-compatible compositions, to generate differentiated tissues and structures, both in vivo and in vitro. Additionally, the ADSCs can be expanded and cultured to produce molecules such as hormones, and to provide conditioned culture media for supporting the **growth** and expansion of other cell populations. In another aspect, the present invention provides a adipose-derived lattice substantially devoid of cells, which includes extracellular matrix material from adipose tissue. The lattice can be used as a substrate to facilitate the **growth** and differentiation of cells, whether in vivo or in vitro, into anlagen or even mature tissues or structures.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 3 OF 40 USPATFULL on STN
ACCESSION NUMBER: 2005:177361 USPATFULL
TITLE: Adipose-derived stem cells and lattices
INVENTOR(S): Hedrick, Marc H., Encinitas, CA, UNITED STATES
Katz, Adam J., Charlottesville, VA, UNITED STATES
Llull, Ramon, Mallorca, SPAIN
Futrell, J. William, Pittsburgh, PA, UNITED STATES
Benhaim, Prosper, Encino, CA, UNITED STATES
Lorenz, Hermann Peter, Belmont, CA, UNITED STATES
Zhu, Min, Los Angeles, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005153441	A1	20050714
APPLICATION INFO.:	US 2003-740315	A1	20031217 (10)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2001-952522, filed on 10 Sep 2001, ABANDONED Continuation-in-part of Ser. No. US 2001-936665, filed on 10 Sep 2001, GRANTED, Pat. No. US 6777231 A 371 of International Ser. No. WO 2000-US6232, filed on 10 Mar 2000

	NUMBER	DATE	
PRIORITY INFORMATION:	US 1999-123711P	19990310 (60)	<--
	US 1999-162462P	19991029 (60)	

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: MANDEL & ADRIANO, 55 SOUTH LAKE AVENUE, SUITE 710, PASADENA, CA, 91101, US
NUMBER OF CLAIMS: 43
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 46 Drawing Page(s)
LINE COUNT: 6696
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides adipose-derived stem cells (ADSCs), adipose-derived stem cell-enriched fractions (ADSC-EF) and adipose-derived lattices, alone and combined with the ADSCs of the invention. In one aspect, the present invention provides an ADSC substantially free of adipocytes and red blood cells and clonal populations of connective tissue stem cells. The ADSCs can be employed, alone or within biologically-compatible compositions, to generate differentiated tissues and structures, both in vivo and in vitro. Additionally, the ADSCs can be expanded and cultured to produce molecules such as hormones, and to provide conditioned culture media for supporting the **growth** and expansion of other cell populations. In another aspect, the present invention provides a adipose-derived lattice substantially devoid of cells, which includes extracellular matrix material from adipose tissue. The lattice can be used as a substrate to facilitate the **growth** and differentiation of cells, whether in vivo or in vitro, into anlagen or even mature tissues or structures.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 4 OF 40 USPATFULL on STN
ACCESSION NUMBER: 2005:170862 USPATFULL
TITLE: Use of anti-IL-17 antibody for the treatment of cartilage damaged by osteoarthritis
INVENTOR(S): Filvaroff, Ellen H., San Francisco, CA, UNITED STATES
PATENT ASSIGNEE(S): Genentech, Inc. (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005147609	A1	20050707
APPLICATION INFO.:	US 2004-948780	A1	20040923 (10)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2000-685823, filed on 9 Oct 2000, ABANDONED Continuation-in-part of Ser. No. US 1999-380142, filed on 25 Aug 1999, ABANDONED A 371 of International Ser. No. WO 1999-US10733, filed on 14 May 1999 Continuation-in-part of Ser. No. US 1999-311832, filed on 14 May 1999, ABANDONED

	NUMBER	DATE	
PRIORITY INFORMATION:	US 2000-192103P	20000324 (60)	
	US 1998-85579P	19980515 (60)	<--
	US 1998-113621P	19981223 (60)	<--
	US 1998-113621P	19981223 (60)	<--

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: GENENTECH, INC., 1 DNA WAY, SOUTH SAN FRANCISCO, CA, 94080, US
NUMBER OF CLAIMS: 27
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 18 Drawing Page(s)
LINE COUNT: 5081
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to methods for the treatment and repair of cartilage, including cartilage damaged by injury or cartilagenous disorders, including degenerative cartilagenous disorders such as arthritis, comprising the administration of IL-17 and/or LIF antagonists (e.g., anti-IL-17 and anti-LIF antibodies). Optionally, the administration may be in combination with a cartilage agent (e.g., peptide **growth** factor, catabolism antagonist, osteo-, synovial, anti-inflammatory factor). Alternatively, the method provides for the treatment and repair of cartilage damaged by injury or cartilagenous disorders comprising the administration of IL-17 or LIF antagonists in combination with standard surgical techniques. Alternatively, the method provides for the treatment and repair of cartilage damaged by injury or cartilagenous disorders comprising the administration of chondrocytes previously treated with an effective amount of IL-17 and/or LIF antagonist. Alternatively, the method provides for the treatment of a mammal suffering from a cartilagenous disorder, comprising the adminstration of a therapeutically effective amount of an IL-17 and/or LIF antagonist.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 5 OF 40 USPATFULL on STN
ACCESSION NUMBER: 2005:114045 USPATFULL
TITLE: Use of a melanoma inhibiting activity factor (MIA) for cartilage and bone repair
INVENTOR(S): Dony, Carola, Munchen, GERMANY, FEDERAL REPUBLIC OF
Proetzel, Gabriele, Schwanfeld, GERMANY, FEDERAL REPUBLIC OF
Leser-Reiff, Ulrike, Penzberg, GERMANY, FEDERAL REPUBLIC OF
PATENT ASSIGNEE(S): Scil Technology GmbH, Martinsried, GERMANY, FEDERAL REPUBLIC OF (non-U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6890897	B1	20050510	
	WO 2000044401		20000803	
APPLICATION INFO.:	US 2001-806635		20000127	(9)
	WO 2000-EP623		20000127	
			20010604	PCT 371 date

	NUMBER	DATE	
PRIORITY INFORMATION:	EP 2001-99101315	19990128	<--

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Andres, Janet
LEGAL REPRESENTATIVE: Fulbright & Jaworski LLP
NUMBER OF CLAIMS: 13
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)
LINE COUNT: 582
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A melanoma inhibiting activity factor (MIA), preferably in combination with an osteoinductive protein, is a useful pharmaceutical agent for promoting bone healing and/or cartilage repair.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 6 OF 40 USPATFULL on STN
ACCESSION NUMBER: 2005:88929 USPATFULL
TITLE: Adipose-derived stem cells and lattices
INVENTOR(S): Katz, Adam J., Charlottesville, VA, UNITED STATES
Llull, Ramon, Mallorca, SPAIN
Futrell, J. William, Pittsburgh, PA, UNITED STATES
Hedrick, Marc H., Encinitas, CA, UNITED STATES
Benhaim, Prosper, Encino, CA, UNITED STATES
Lorenz, Hermann Peter, Belmont, CA, UNITED STATES
Zhu, Min, San Diego, CA, UNITED STATES
Zuk, Patricia, Venice, CA, UNITED STATES
Ashjian, Peter H., New York, NY, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005076396	A1	20050407
APPLICATION INFO.:	US 2003-651564	A1	20030829 (10)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 2001-952522, filed on 10 Sep 2001, ABANDONED Continuation-in-part of Ser. No. US 2001-936665, filed on 10 Sep 2001, GRANTED, Pat. No. US 6777231 Continuation-in-part of Ser. No. WO 2000-US6232, filed on 10 Mar 2000, PENDING

	NUMBER	DATE	
PRIORITY INFORMATION:	US 1999-123711P	19990310 (60)	<--
	US 1999-162462P	19991029 (60)	

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: MANDEL & ADRIANO, 55 SOUTH LAKE AVENUE, SUITE 710, PASADENA, CA, 91101
NUMBER OF CLAIMS: 21
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 64 Drawing Page(s)
LINE COUNT: 9217
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides adipose-derived stem cells (ADSCs), adipose-derived stem cell-enriched fractions (ADSC-EF) and adipose-derived lattices, alone and combined with the ADSCs of the invention. In one aspect, the present invention provides an ADSC substantially free of adipocytes and red blood cells and clonal populations of connective tissue stem cells. The ADSCs can be employed, alone or within biologically-compatible compositions, to generate differentiated tissues and structures, both in vivo and in vitro. Additionally, the ADSCs can be expanded and cultured to produce

molecules such as hormones, and to provide conditioned culture media for supporting the **growth** and expansion of other cell populations. In another aspect, the present invention provides a adipose-derived lattice substantially devoid of cells, which includes extracellular matrix material from adipose tissue. The lattice can be used as a substrate to facilitate the **growth** and differentiation of cells, whether in vivo or in vitro, into anlagen or even mature tissues or structures.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 7 OF 40 USPATFULL on STN

ACCESSION NUMBER:	2004:248005 USPATFULL
TITLE:	Methods and compositions for healing and repair of articular cartilage
INVENTOR(S):	Zhang, Renwen, Rutherford, NJ, UNITED STATES Peluso, Diane, Marshfield, MA, UNITED STATES Morris, Elisabeth, Sherborn, MA, UNITED STATES
PATENT ASSIGNEE(S):	Genetics Institute, LLC (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004192605	A1	20040930
APPLICATION INFO.:	US 2004-779638	A1	20040218 (10)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2000-493545, filed on 28 Jan 2000, GRANTED, Pat. No. US 6727224

	NUMBER	DATE	
PRIORITY INFORMATION:	US 1999-118160P	19990201 (60)	<--

DOCUMENT TYPE:	Utility
FILE SEGMENT:	APPLICATION
LEGAL REPRESENTATIVE:	FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, LLP, 1300 I STREET, NW, WASHINGTON, DC, 20005
NUMBER OF CLAIMS:	2
EXEMPLARY CLAIM:	1
LINE COUNT:	358

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Methods and compositions are provided for the treatment of articular cartilage defects and disease involving the combination of tissue, such as osteochondral grafts, with active **growth** factor. The active **growth** factor is preferably a composition containing at least one bone morphogenetic protein and a suitable carrier. The method results in the regeneration of functional repair of articular cartilage tissue.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 8 OF 40 USPATFULL on STN

ACCESSION NUMBER:	2004:103728 USPATFULL
TITLE:	Methods and compositions for healing and repair of articular cartilage
INVENTOR(S):	Zhang, Renwen, Rutherford, NJ, United States Peluso, Diane, Marshfield, MA, United States Morris, Elisabeth, Sherborn, MA, United States
PATENT ASSIGNEE(S):	Genetics Institute, LLC., Cambridge, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE

PATENT INFORMATION: US 6727224 B1 20040427
APPLICATION INFO.: US 2000-493545 20000128 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-118160P	19990201 (60) <--

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Low, Christopher S. F.
ASSISTANT EXAMINER: Robinson, Hope A.
LEGAL REPRESENTATIVE: Finnegan, Henderson, Farabow, Garrett & Dunner LLP.
NUMBER OF CLAIMS: 13
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)
LINE COUNT: 390
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods and compositions are provided for the treatment of articular cartilage defects and disease involving the combination of tissue, such as osteochondral grafts, with active **growth** factor. The active **growth** factor is preferably a composition containing at least one bone morphogenetic protein and a suitable carrier. The method results in the regeneration of functional repair of articular cartilage tissue.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 9 OF 40 USPATFULL on STN
ACCESSION NUMBER: 2004:2535 USPATFULL
TITLE: Osteogenic paste compositions and uses thereof
INVENTOR(S): McKay, William F., Memphis, TN, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004002558	A1	20040101
APPLICATION INFO.:	US 2001-923117	A1	20010806 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. WO 2000-US3024, filed on 4 Feb 2000, UNKNOWN

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-118614P	19990204 (60) <--

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Kenneth A. Gandy, Woodard Emhart Naughton Moriarty & McNett, Suite 3700, 111 Moument Circle, Indianapolis, IN, 46204-5137
NUMBER OF CLAIMS: 29
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 2 Drawing Page(s)
LINE COUNT: 761
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Described are osteogenic paste compositions with enhanced osteoinductive properties for use in bone repair. Compositions comprising a quickly resorbable paste carrier, a more slowly resorbed mineral matrix, and Bone Morphogenetic Protein (BMP) or other osteogenic factor are described which enable increased osteoinductive activity while retaining a reliable scaffold for the **formation** of new bone at the implant site. Methods for making and methods for therapeutic use of the compositions are also disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 10 OF 40 USPATFULL on STN
ACCESSION NUMBER: 2003:167076 USPATFULL
TITLE: Complex three-dimensional composite scaffold resistant to delimination
INVENTOR(S): Sherwood, Jill K., Edison, NJ, UNITED STATES
Monkhouse, Donald, Radnor, PA, UNITED STATES
Gaylo, Christopher M., Princeton Junction, NJ, UNITED STATES
PATENT ASSIGNEE(S): Therics, Inc. (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003114936	A1	20030619
APPLICATION INFO.:	US 2002-207531	A1	20020729 (10)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1999-416346, filed on 12 Oct 1999, GRANTED, Pat. No. US 6454811

	NUMBER	DATE	
PRIORITY INFORMATION:	US 1998-103853P	19981012 (60)	<--

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: PATREA L. PABST, HOLLAND & KNIGHT LLP, SUITE 2000, ONE ATLANTIC CENTER, 1201 WEST PEACHTREE STREET, N.E., ATLANTA, GA, 30309-3400
NUMBER OF CLAIMS: 41
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 9 Drawing Page(s)
LINE COUNT: 2846
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The devices disclosed herein are composite implantable devices having a gradient of one or more of the following: materials, macroarchitecture, microarchitecture, or mechanical properties, which can be used to select or promote attachment of specific cell types on and in the devices prior to and/or after implantation. In preferred embodiments, the implants include complex three-dimensional structure, including curved regions and saddle-shaped areas. In various embodiments, the gradient **forms** a transition zone in the device from a region composed of materials or having properties best suited for one type of tissue to a region composed of materials or having properties suited for a different type of tissue. Methods to improve these devices for use in repair or replacement of cartilage and/or bone have been developed, which specifically address 1) the selection of the appropriate polymeric material for the cartilage region, 2) mechanical testing of the bone region including the effect of porosity and polymer/calcium phosphate ratio, and 3) prevention of delamination in the transition region.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 11 OF 40 USPATFULL on STN
ACCESSION NUMBER: 2003:119667 USPATFULL
TITLE: Adipose-derived stem cells and lattices
INVENTOR(S): Hedrick, Marc H., Encino, CA, UNITED STATES
Katz, Adam J., Charlottesville, VA, UNITED STATES
Llull, Ramon, Mallorca, SPAIN
Futrell, J. William, Pittsburgh, PA, UNITED STATES
Benhaim, Prosper, Encino, CA, UNITED STATES
Lorenz, Hermann Peter, Belmont, CA, UNITED STATES

Zhu, Min, Los Angeles, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003082152	A1	20030501
APPLICATION INFO.:	US 2001-952522	A1	20010910 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. WO 2000-US6232, filed on 10 Mar 2000, UNKNOWN

	NUMBER	DATE	
PRIORITY INFORMATION:	US 1999-123711P	19990310 (60)	<--
	US 1999-162462P	19991029 (60)	

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: MANDEL & ADRIANO, 55 SOUTH LAKE AVENUE, SUITE 710, PASADENA, CA, 91101
NUMBER OF CLAIMS: 43
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 43 Drawing Page(s)
LINE COUNT: 6443
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides adipose-derived stem cells (ADSCs), adipose-derived stem cell-enriched fractions (ADSC-EF) and adipose-derivedlattices, alone and combined with the ADSCs of the invention. In one aspect, the present invention provides an ADSC substantially free of adipocytes and red blood cells and clonal populations of connective tissue stem cells. The ADSCs can be employed, alone or within biologically-compatible compositions, to generate differentiated tissues and structures, both in vivo and in vitro. Additionally, the ADSCs can be expanded and cultured to produce molecules such as hormones, and to provide conditioned culture media for supporting the **growth** and expansion of other cell populations. In another aspect, the present invention provides a adipose-derived lattice substantially devoid of cells, which includes extracellular matrix material from adipose tissue. The lattice can be used as a substrate to facilitate the **growth** and differentiation of cells, whether in vivo or in vitro, into anlagen or even mature tissues or structures.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 12 OF 40 USPATFULL on STN
ACCESSION NUMBER: 2003:67453 USPATFULL
TITLE: Resorbable scaffolds to promote cartilage regeneration
INVENTOR(S): Mansmann, Kevin A., 250 W. Lancaster Ave., Suite 310, Paoli, PA, United States 19301

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6530956	B1	20030311
APPLICATION INFO.:	US 1999-393522		19990910 (9)

	NUMBER	DATE	
PRIORITY INFORMATION:	US 1998-99817P	19980910 (60)	<--

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: McDermott, Corrine
ASSISTANT EXAMINER: Phan, Hieu

LEGAL REPRESENTATIVE: Kelly, Patrick D.
NUMBER OF CLAIMS: 24
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 12 Drawing Figure(s); 4 Drawing Page(s)
LINE COUNT: 1690

AB A load-sharing resorbable scaffold is used to help transplanted chondrocytes or other cells generate new cartilage in a damaged joint such as a knee, hip, or shoulder. These scaffolds use two distinct matrix materials. One is a relatively stiff matrix material, designed to withstand and resist a compressive articulating load placed on the joint during the convalescent period, shortly after surgery. Due to the requirement for relatively high stiffness, this material must be denser and have less pore space than other matrices, so it will not be able to support highly rapid cell proliferation and cartilage secretion. The second material comprises a more open and porous matrix, designed to promote maximal rapid generation of new cartilage. In one preferred geometric arrangement, the stiffer matrix material is used to provide an outer rim and one or more internal runners, all of which can distribute a compressive load between them. The rim and runners create a cluster of internal cell-**growing** compartments, which are filled with the porous and open matrix material to encourage rapid cell reproduction and cartilage generation. These improved scaffolds can also have an articulating outer membrane with certain traits disclosed herein, bonded to and resting upon the upper edges of the runners and rim. The scaffold will support the membrane with a degree of stiffness and resiliency that allows the membrane to mimic a healthy cartilage surface. These scaffolds can be made of flexible materials, to allow them to be inserted into a damaged joint using arthroscopic methods and tools.

L17 ANSWER 13 OF 40 USPATFULL on STN
ACCESSION NUMBER: 2003:57086 USPATFULL
TITLE: Autologous immune cell therapy: cell compositions, methods and applications to treatment of human disease
INVENTOR(S): Gruenberg, Micheal L., Poway, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003039650	A1	20030227
APPLICATION INFO.:	US 2002-155404	A1	20020522 (10)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1998-127138, filed on 31 Jul 1998, PENDING Division of Ser. No. US 1996-700565, filed on 25 Jul 1996, PENDING Continuation-in-part of Ser. No. WO 1996-US12170, filed on 24 Jul 1996, UNKNOWN

	NUMBER	DATE	
PRIORITY INFORMATION:	US 1995-44693P	19950726 (60)	<--

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Stephanie Seidman, Heller Ehrman White & McAuliffe LLP, 7th Floor, 4350 La Jolla Village Drive, San Diego, CA, 92122
NUMBER OF CLAIMS: 25
EXEMPLARY CLAIM: 1
LINE COUNT: 2470
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Compositions containing clinically relevant numbers of immune cells that have been isolated from a patient differentiated and/or expanded ex vivo. Methods for treating or preventing disease or otherwise altering

the immune status of the patient by reinfusing such cells into the donor are also provided. Methods for expanding and/or immune cells, including effector cells, in the absence of exogenous IL-2, and for administering the cells in the absence of co-infused IL-2 are also provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 14 OF 40 USPATFULL on STN
ACCESSION NUMBER: 2003:44788 USPATFULL
TITLE: Bone morphogenic protein
INVENTOR(S): Young, Paul, Gaithersburg, MD, UNITED STATES
Ruben, Steven M., Olney, MD, UNITED STATES
PATENT ASSIGNEE(S): Human Genome Sciences, Inc., Rockville, MD, UNITED STATES, 20850 (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003032098	A1	20030213
APPLICATION INFO.:	US 2002-103197	A1	20020322 (10)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1999-458690, filed on 10 Dec 1999, PENDING Continuation-in-part of Ser. No. WO 1999-US15783, filed on 14 Jul 1999, UNKNOWN

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-92922P	19980715 (60)

<--
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850
NUMBER OF CLAIMS: 21
EXEMPLARY CLAIM: 1
LINE COUNT: 8264
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to novel human BMP polypeptides and isolated nucleic acids containing the coding regions of the genes encoding such polypeptides. Also provided are vectors, host cells, antibodies, and recombinant methods for producing human BMP polypeptides. The invention further relates to diagnostic and therapeutic methods useful for diagnosing and treating disorders related to these novel human BMP polypeptides.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 15 OF 40 USPATFULL on STN
ACCESSION NUMBER: 2003:33183 USPATFULL
TITLE: Device and method for regeneration and repair of cartilage lesions
INVENTOR(S): Atkinson, Brent, Lakewood, CO, United States
Benedict, James J., Arvada, CO, United States
PATENT ASSIGNEE(S): Sulzer Biologics Inc., Austin, TX, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6514514	B1	20030204
APPLICATION INFO.:	US 1999-250370		19990216 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. WO 1998-EP5100, filed on 12 Aug 1998

	NUMBER	DATE	
PRIORITY INFORMATION:	EP 1997-810567	19970814	<--

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Baker, Anne-Marie
LEGAL REPRESENTATIVE: Sheridan Ross P.C.
NUMBER OF CLAIMS: 58
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 14 Drawing Figure(s); 8 Drawing Page(s)
LINE COUNT: 2122
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Disclosed is a cartilage repair product that induces both cell **ingrowth** into a bioresorbable material and cell differentiation into cartilage tissue. Such a product is useful for regenerating and/or repairing both vascular and avascular cartilage lesions, particularly articular cartilage lesions, and even more particularly mensical tissue lesions, including tears as well as segmental defects. Also disclosed is a method of regenerating and repairing cartilage lesions using such a product.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 16 OF 40 USPATFULL on STN
ACCESSION NUMBER: 2002:322566 USPATFULL
TITLE: AUTOLOGOUS IMMUNE CELL THERAPY: CELL COMPOSITIONS, METHODS AND APPLICATIONS TO TREATMENT OF HUMAN DISEASE
INVENTOR(S): GRUENBERG, MICHEAL L., POWAY, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002182730	A1	20021205
APPLICATION INFO.:	US 1998-127411	A1	19980731 (9)

RELATED APPLN. INFO.: Division of Ser. No. US 1996-700565, filed on 25 Jul 1996, PENDING Continuation-in-part of Ser. No. WO 1996-US12170, filed on 24 Jul 1996, UNKNOWN

	NUMBER	DATE	
PRIORITY INFORMATION:	US 1995-44693P	19950726 (60)	<--

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: STEPHANIE SEIDMAN, HELLER EHRMAN WHITE & MCAULIFFE LLP, 7th FLOOR, 4350 LA JOLLA VILLAGE DRIVE, SAN DIEGO, CA 92122-1246, CA, 92122-1246
NUMBER OF CLAIMS: 153
EXEMPLARY CLAIM: 1
LINE COUNT: 2815
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Compositions containing clinically relevant numbers of immune cells that have been isolated from a patient differentiated and/or expanded ex vivo. Methods for treating or preventing disease or otherwise altering the immune status of the patient by reinfusing such cells into the donor are also provided. Methods for expanding and/or immune cells, including effector cells, in the absence of exogenous IL-2, and for administering the cells in the absence of co-infused IL-2 are also provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 17 OF 40 USPATFULL on STN

ACCESSION NUMBER: 2002:246177 USPATFULL
TITLE: Composites for tissue regeneration and methods of manufacture thereof
INVENTOR(S): Sherwood, Jill K., Princeton, NJ, United States
Griffith, Linda G., Cambridge, MA, United States
Brown, Scott, Princeton, NJ, United States
PATENT ASSIGNEE(S): Massachusetts Institute of Technology, Cambridge, MA, United States (U.S. corporation)
Therics, Inc., Princeton, NJ, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6454811	B1	20020924	
APPLICATION INFO.:	US 1999-416346		19991012	(9)

	NUMBER	DATE	
PRIORITY INFORMATION:	US 1998-103853P	19981012 (60)	<--

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: McDermott, Corrine
ASSISTANT EXAMINER: Stewart, Alvin
LEGAL REPRESENTATIVE: Holland & Knight LLP
NUMBER OF CLAIMS: 62
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 24 Drawing Figure(s); 4 Drawing Page(s)
LINE COUNT: 2036
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Composite devices for tissue engineering are provided having a gradient of one or more of the following: materials, macroarchitecture, microarchitecture, or mechanical properties, which can be used to select or promote attachment of specific cell types on and in the devices prior to and/or after implantation. In various embodiments, the gradient **forms** a transition zone in the device from a region composed of materials or having properties best suited for one type of tissue to a region composed of materials or having properties suited for a different type of tissue. The devices are made in a continuous process that imparts structural integrity as well as a unique gradient of materials in the architecture. The gradient may relate to the materials, the macroarchitecture, the microarchitecture, the mechanical properties of the device, or several of these together. The devices disclosed herein typically are made using solid free **form** processes, especially three-dimensional printing process (3DP.TM.). The device can be manufactured in a single continuous process such that the transition from one **form** of tissue regeneration scaffold and the other **form** of tissue regeneration scaffold have no "seams" and are not subject to differential swelling along an axis once the device is implanted into physiological fluid.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 18 OF 40 USPATFULL on STN
ACCESSION NUMBER: 2001:182096 USPATFULL
TITLE: Autologous immune cell therapy: cell compositions, methods and applications to treatment of human disease
INVENTOR(S): Gruenberg, Micheal L., Poway, CA, United States

	NUMBER	KIND	DATE

PATENT INFORMATION: US 2001031253 A1 20011018
APPLICATION INFO.: US 2001-824906 A1 20010402 (9)
RELATED APPLN. INFO.: Division of Ser. No. US 1996-700565, filed on 25 Jul 1996, PENDING Division of Ser. No. WO 1996-US12170, filed on 24 Jul 1996, UNKNOWN

	NUMBER	DATE	
PRIORITY INFORMATION:	US 1995-44693P	19950726 (60)	<--

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Stephanie Seidman, Heller Ehrman White & McAuliffe LLP, 4250 Executive Square, 7th Floor, La Jolla, CA, 92037
NUMBER OF CLAIMS: 101
EXEMPLARY CLAIM: 1
LINE COUNT: 2692
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Compositions containing clinically relevant numbers of immune cells that have been isolated from a patient differentiated and/or expanded ex vivo. Methods for treating or preventing disease or otherwise altering the immune status of the patient by reinfusing such cells into the donor are also provided. Methods for expanding and/or immune cells, including effector cells, in the absence of exogenous IL-2, and for administering the cells in the absence of co-infused IL-2 are also provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 19 OF 40 USPATFULL on STN
ACCESSION NUMBER: 2000:174116 USPATFULL
TITLE: Methods and compositions for programming an organic matrix for remodeling into a target tissue
INVENTOR(S): Ashkar, Samy, Boston, MA, United States
Atala, Anthony, Weston, MA, United States
PATENT ASSIGNEE(S): Children's Medical Center Corporation, Boston, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6165487		20001226	
APPLICATION INFO.:	US 1998-58048		19980409 (9)	
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1997-937873, filed on 29 Sep 1997 And a continuation of Ser. No. WO 1997-US17530, filed on 29 Sep 1997			

	NUMBER	DATE	
PRIORITY INFORMATION:	US 1996-27123P	19960930 (60)	<--
	US 1994-27123P	19940805 (60)	<--

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Azpuru, Carlos A.
LEGAL REPRESENTATIVE: Lahive & Cockfield, LLP, Hanley, Elizabeth A., Milasincic, Debra J.
NUMBER OF CLAIMS: 35
EXEMPLARY CLAIM: 1
LINE COUNT: 1016
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods for programming a non-immunogenic matrix for remodeling into a target tissue are disclosed. Also dislosed are compositions which can promote the **growth** of selected tissue types in a subject.

Methods for preparing the compositions are also described. The methods and compositions are useful for treatment of tissue defects in tissues such as bone, cartilage, and muscle.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 20 OF 40 USPATFULL on STN
ACCESSION NUMBER: 1999:96274 USPATFULL
TITLE: Hyaluronan based biodegradable scaffolds for tissue repair
INVENTOR(S): Valentini, Robert F., Cranston, RI, United States
Kim, Hyun D., Providence, RI, United States
PATENT ASSIGNEE(S): Brown University, Providence, RI, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5939323		19990817	
APPLICATION INFO.:	US 1997-864709		19970528	(8)

	NUMBER	DATE	
PRIORITY INFORMATION:	US 1996-18492P	19960528 (60)	<--

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Witz, Jean C.
ASSISTANT EXAMINER: Hanley, Susan
LEGAL REPRESENTATIVE: Wolf, Greenfield & Sacks, P.C.
NUMBER OF CLAIMS: 8
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 2 Drawing Figure(s); 1 Drawing Page(s)
LINE COUNT: 848
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A **hyaluronic acid** derivitized scaffold and method of **forming** are disclosed. The scaffolds are useful for various medical purposes such as tissue repair, tissue reconstruction and wound healing. In order to enhance these processes the scaffolds may be engineered to incorporate biologically active molecules such as BMP.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 21 OF 40 USPATFULL on STN
ACCESSION NUMBER: 1999:56457 USPATFULL
TITLE: Cartilage induction by bone morphogenetic proteins
INVENTOR(S): Hattersley, Gary, Cambridge, MA, United States
Wolfman, Neil M., Dover, MA, United States
Morris, Elisabeth A., Southboro, MA, United States
Rosen, Vicki A., Chestnut Hill, MA, United States
PATENT ASSIGNEE(S): Genetics Institute, Inc., Cambridge, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5902785		19990511	<--
APPLICATION INFO.:	US 1996-646193		19960507	(8)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1995-467110, filed on 6 Jun 1995, now abandoned
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Kemmerer, Elizabeth

LEGAL REPRESENTATIVE: Lazar, Steven R., Gyure, Barbara A.
NUMBER OF CLAIMS: 6
EXEMPLARY CLAIM: 1
LINE COUNT: 811
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Compositions of proteins with cartilaginous tissue inducing and maintenance activity are disclosed. The compositions are useful in the treatment of osteoarthritis, cartilage defects and in related tissue repair.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 22 OF 40 USPATFULL on STN
ACCESSION NUMBER: 1999:53151 USPATFULL
TITLE: Bone-derived implant for load-supporting applications
INVENTOR(S): Boyce, Todd M., Aberdeen, NJ, United States
Manrique, Albert, Manalapan, NJ, United States
Scarborough, Nelson L., Ocean, NJ, United States
Russell, James L., Little Silver, NJ, United States
PATENT ASSIGNEE(S): Osteotech, Inc., Eatontown, NJ, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5899939		19990504	<--
APPLICATION INFO.:	US 1998-9997		19980121 (9)	

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Prebilic, Paul B.
LEGAL REPRESENTATIVE: Dilworth & Barrese
NUMBER OF CLAIMS: 33
EXEMPLARY CLAIM: 1,28
NUMBER OF DRAWINGS: 6 Drawing Figure(s); 3 Drawing Page(s)
LINE COUNT: 484
AB A bone-derived implant is provided which is made up of one or more layers of fully mineralized or partially **demineralized** ~~cortical bone~~ and, optionally, one or more layers of some other material. The layers constituting the implant are assembled into a ~~unitary~~ structure to provide an implant exhibiting good overall load-supporting properties.

L17 ANSWER 23 OF 40 USPATFULL on STN
ACCESSION NUMBER: 1999:36949 USPATFULL
TITLE: Engineering oral tissues
INVENTOR(S): Mooney, David J., Ann Arbor, MI, United States
Rutherford, Robert B., Ann Arbor, MI, United States
PATENT ASSIGNEE(S): The Regents of the University of Michigan, Ann Arbor, MI, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5885829		19990323	<--
APPLICATION INFO.:	US 1997-864494		19970528 (8)	

	NUMBER	DATE	
PRIORITY INFORMATION:	US 1996-18450P	19960528 (60)	<--

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted

PRIMARY EXAMINER: Degen, Nancy
LEGAL REPRESENTATIVE: Arnold, White & Durkee
NUMBER OF CLAIMS: 109
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 17 Drawing Figure(s); 11 Drawing Page(s)
LINE COUNT: 8001
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Disclosed are methods for regenerating dental and oral tissues from viable cells using ex vivo culture on a structural matrix. The regenerated oral tissues and tissue-matrix preparations thus provided have both clinical applications in dentistry and oral medicine and are also useful in in vitro toxicity and biocompatibility testing.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 24 OF 40 USPATFULL on STN
ACCESSION NUMBER: 1999:12772 USPATFULL
TITLE: Nucleic acids encoding osteogenic proteins
INVENTOR(S): Oppermann, Hermann, Medway, MA, United States
Ozkaynak, Engin, Milford, MA, United States
Kuberasampath, Thangavel, Medway, MA, United States
Rueger, David C., Hopkinton, MA, United States
Pang, Roy H. L., Medway, MA, United States
PATENT ASSIGNEE(S): Stryker Corporation, Kalamazoo, MI, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5863758		19990126	<--
APPLICATION INFO.:	US 1994-449700		19940523 (8)	

RELATED APPLN. INFO.: Division of Ser. No. US 1993-147023, filed on 1 Nov 1993, now patented, Pat. No. US 5468845 which is a division of Ser. No. US 1992-841646, filed on 21 Feb 1992, now patented, Pat. No. US 5266683 which is a continuation-in-part of Ser. No. US 1992-827052, filed on 28 Jan 1992, now patented, Pat. No. US 5250302 Ser. No. Ser. No. US 1990-579865, filed on 7 Sep 1990, now patented, Pat. No. US 5108753 Ser. No. Ser. No. US 1990-621849, filed on 4 Dec 1990, now abandoned Ser. No. Ser. No. US 1990-621988, filed on 4 Dec 1990, now abandoned Ser. No. Ser. No. US 1991-810560, filed on 20 Dec 1991, now abandoned Ser. No. Ser. No. US 1990-569920, filed on 20 Aug 1990, now abandoned Ser. No. Ser. No. US 1990-600024, filed on 18 Oct 1990, now abandoned Ser. No. Ser. No. US 1990-599543, filed on 18 Oct 1990, now abandoned Ser. No. Ser. No. US 1990-616374, filed on 21 Nov 1990, now patented, Pat. No. US 5162114 And Ser. No. US 1990-483913, filed on 22 Feb 1990, now patented, Pat. No. US 5171574 , said Ser. No. US 827052 which is a division of Ser. No. US 1988-179406, filed on 8 Apr 1988, now patented, Pat. No. US 4968590 , said Ser. No. US 579865 which is a division of Ser. No. US 179406 , said Ser. No. US 621849 which is a division of Ser. No. US 1988-232630, filed on 15 Aug 1988, now abandoned which is a continuation-in-part of Ser. No. US 179406 , said Ser. No. US 621988 which is a division of Ser. No. US 1989-315342, filed on 23 Feb 1989, now patented, Pat. No. US 5011691 which is a continuation-in-part of Ser. No. US 232630 , said Ser. No. US 810560 which is a

continuation of Ser. No. US 1991-660162, filed on 22 Feb 1991, now abandoned which is a continuation of Ser. No. US 1989-422699, filed on 17 Oct 1989, now abandoned which is a continuation-in-part of Ser. No. US 315342 , said Ser. No. US 569920 which is a continuation-in-part of Ser. No. US 422699 And Ser. No. US 483913 which is a continuation-in-part of Ser. No. US 1989-422613, filed on 17 Oct 1989, now patented, Pat. No. US 4975526 which is a continuation-in-part of Ser. No. US 315342 , said Ser. No. US 600024 which is a continuation-in-part of Ser. No. US 569920 , said Ser. No. US 599543 which is a continuation-in-part of Ser. No. US 569920 , said Ser. No. US 616374 which is a division of Ser. No. US 422613

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Loring, Susan A.
LEGAL REPRESENTATIVE: Testa, Hurwitz & Thibeault, LLP
NUMBER OF CLAIMS: 49
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 80 Drawing Figure(s); 49 Drawing Page(s)
LINE COUNT: 5104
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Disclosed are (1) osteogenic devices comprising a matrix containing substantially pure natural-sourced mammalian osteogenic protein; (2) DNA and amino acid sequences for novel polypeptide chains useful as subunits of dimeric osteogenic proteins; (3) vectors carrying sequences encoding these novel polypeptide chains and host cells transfected with these vectors; (4) methods of producing these polypeptide chains using recombinant DNA technology; (5) antibodies specific for these novel polypeptide chains; (6) osteogenic devices comprising these recombinantly produced proteins in association with an appropriate carrier matrix; and (7) methods of using the osteogenic devices to mimic the natural course of endochondral bone **formation** in mammals.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 25 OF 40 USPATFULL on STN
ACCESSION NUMBER: 1998:162472 USPATFULL
TITLE: Compositions and therapeutic methods using morphogenic proteins and stimulatory factors
INVENTOR(S): Lee, John C., San Antonio, TX, United States
Yeh, Lee-Chuan C., San Antonio, TX, United States
PATENT ASSIGNEE(S): Stryker Corporation, Kalamazoo, MI, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5854207		19981229	<--
APPLICATION INFO.:	US 1998-27873		19980223	

RELATED APPLN. INFO.: Division of Ser. No. US 1995-570752, filed on 12 Dec 1995
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Nutter, Nathan M.
LEGAL REPRESENTATIVE: Fish & Neave, Haley, Jr., James F., Ruskin, Barbara A.
NUMBER OF CLAIMS: 28
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 12 Drawing Figure(s); 12 Drawing Page(s)
LINE COUNT: 3072
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides pharmaceutical compositions comprising a morphogenic protein stimulatory factor (MPSF) for improving the tissue inductive activity of morphogenic proteins, particularly those belonging to the BMP protein family. Methods for improving the tissue inductive activity of a morphogenic protein in a mammal using those compositions are provided. This invention also provides implantable morphogenic devices comprising a morphogenic protein and a MPSF disposed within a carrier, that are capable of inducing tissue **formation** in allogeneic and xenogeneic implants. Methods for inducing local tissue **formation** from a progenitor cell in a mammal using those devices are also provided. A method for accelerating **allograft** repair in a mammal using morphogenic devices is provided. This invention also provides a prosthetic device comprising a prosthesis coated with a morphogenic protein and a MPSF, and a method for promoting in vivo integration of an implantable prosthetic device to enhance the bond **strength** between the prosthesis and the existing target tissue at the joining site. Methods of treating tissue degenerative conditions in a mammal using the pharmaceutical compositions are also provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 26 OF 40 USPATFULL on STN
ACCESSION NUMBER: 1998:154240 USPATFULL
TITLE: Compositions comprising bone morphogenic proteins and truncated parathyroid hormone related peptide and methods of inducing cartilage by administration of same
INVENTOR(S): Hattersley, Gary, 10 Rogers St., #303, Cambridge, MA, United States 02142
Rosen, Vicki A., 2 Cedar Rd., Chestnut Hill, MA, United States 02167

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5846931		19981208	<--
APPLICATION INFO.:	US 1997-926942		19970910 (8)	

RELATED APPLN. INFO.: Continuation of Ser. No. US 1996-622101, filed on 26 Mar 1996, now patented, Pat. No. US 5700774
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Kemmerer, Elizabeth
LEGAL REPRESENTATIVE: Lazar, Steven R.
NUMBER OF CLAIMS: 7
EXEMPLARY CLAIM: 1
LINE COUNT: 637
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Compositions of proteins with chondrocyte and cartilaginous tissue inducing activity, as well as method of using those compositions, are disclosed. The compositions comprise one or more proteins of the **transforming growth** factor-β (TGF-β) superfamily of proteins, particularly bone morphogenetic proteins (BMPs), in combination with parathyroid hormone related polypeptide (PTHrP) or an equivalent PTH-like polypeptide. The compositions and methods are useful in the treatment of osteoarthritis, cartilage defects and in related tissue repair.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 27 OF 40 USPATFULL on STN
ACCESSION NUMBER: 1998:149524 USPATFULL
TITLE: Method for repairing cartilage

INVENTOR(S): Naughton, Gail K., Del Mar, CA, United States
Willoughby, Jane, Solana Beach, CA, United States
PATENT ASSIGNEE(S): Advanced Tissue Sciences, Inc., La Jolla, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5842477		19981201	<--
APPLICATION INFO.:	US 1996-604284		19960221	(8)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Prebilic, Paul B.
LEGAL REPRESENTATIVE: Pennie & Edmonds LLP
NUMBER OF CLAIMS: 48
EXEMPLARY CLAIM: 1
LINE COUNT: 1467

AB The present invention relates to methods of making and/or repairing cartilage in vivo comprising implanting into a patient, at a site of cartilage damage or loss, a biocompatible, non-living three-dimensional scaffold or framework structure in combination with periosteal/perichondrial tissue that can be used to hold the scaffold in place and provides a source of chondrocyte progenitor cells, chondrocytes and other stromal cells for attachment to the scaffold in vivo. In addition, a preparation of cells that can include chondrocytes, chondrocyte progenitor cells or other stromal cells is administered, either before, during or after implantation of the scaffold and/or the periosteal perichondrial tissue; the cells are administered directly into the site of the implant in vivo and promote the induction of factors that enhance chondrogenesis and the migration of chondrocytes, progenitor cells and other stromal cells from the adjacent in vivo environment into the scaffold for the production of new cartilage at the site of implantation.

L17 ANSWER 28 OF 40 USPATFULL on STN
ACCESSION NUMBER: 1998:144150 USPATFULL
TITLE: Semi-interpenetrating polymer networks
INVENTOR(S): Shastri, Venkatram R., Allston, MA, United States
Langer, Robert S., Newton, MA, United States
Tarcha, Peter J., Lake Villa, IL, United States
PATENT ASSIGNEE(S): Massachusetts Institute of Technology, Cambridge, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5837752		19981117	<--
APPLICATION INFO.:	US 1997-895762		19970717	(8)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Buttner, David
LEGAL REPRESENTATIVE: Arnall Golden & Gregory, LLP
NUMBER OF CLAIMS: 32
EXEMPLARY CLAIM: 1
LINE COUNT: 927
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Compositions for bone repair have been developed based on linear hydrophobic degradable polymers and monomers or macromers, at least one of which includes an anhydride linkage. The monomers and/or macromers crosslink each other but not to the linear polymer to **form** semi-interpenetrating networks. The compositions can include various

excipients, therapeutic and/or diagnostic agents. The compositions can be polymerized in the presence of dissolvable particles such as inorganic salts and proteinaceous materials to provide a porous polymer network. The compositions can be injected into a patient and polymerized in situ or can be polymerized ex vivo and implanted. When polymerized ex vivo, the composition can be shaped into various articles, such as pins, screws, and hollow tubes, which can be used to repair broken bones.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 29 OF 40 USPATFULL on STN

ACCESSION NUMBER: 1998:12129 USPATFULL

TITLE: Method of selectively extracting osteogenic protein

INVENTOR(S): Oppermann, Hermann, Medway, MA, United States
Ozkaynak, Engin, Milford, MA, United States
Kuberasampath, Thangavel, Medway, MA, United States
Rueger, David C., Hopkinton, MA, United States
Pang, Roy H. L., Medway, MA, United States

PATENT ASSIGNEE(S): Stryker Corporation, Natick, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5714589		19980203	<--
APPLICATION INFO.:	US 1995-447570		19950523 (8)	

RELATED APPLN. INFO.: Division of Ser. No. US 1993-147023, filed on 1 Nov 1993, now patented, Pat. No. US 5468845 which is a division of Ser. No. US 1992-841646, filed on 21 Feb 1992, now patented, Pat. No. US 5266683 which is a continuation-in-part of Ser. No. US 1992-827052, filed on 28 Jan 1992, now patented, Pat. No. US 5250302 Ser. No. Ser. No. US 1990-579865, filed on 7 Sep 1990, now patented, Pat. No. US 5108753 Ser. No. Ser. No. US 1990-621849, filed on 4 Dec 1990, now abandoned Ser. No. Ser. No. US 1990-621988, filed on 4 Dec 1990, now abandoned Ser. No. Ser. No. US 1991-810560, filed on 20 Dec 1991, now abandoned Ser. No. Ser. No. US 1990-569920, filed on 20 Aug 1990, now abandoned Ser. No. Ser. No. US 1990-600024, filed on 18 Oct 1990, now abandoned Ser. No. Ser. No. US 1990-599543, filed on 18 Oct 1990, now abandoned Ser. No. Ser. No. US 1990-616374, filed on 21 Nov 1990, now patented, Pat. No. US 5162114 And Ser. No. US 1990-483913, filed on 22 Feb 1990, now patented, Pat. No. US 5171574 , said Ser. No. US -827052 which is a division of Ser. No. US 1988-179406, filed on 8 Apr 1988, now patented, Pat. No. US 4968590 , said Ser. No. US -579865 which is a division of Ser. No. US -179406 , said Ser. No. US -621849 which is a division of Ser. No. US 1988-232630, filed on 15 Aug 1988, now abandoned which is a continuation-in-part of Ser. No. US -179406 , said Ser. No. US -621988 which is a division of Ser. No. US 1989-315342, filed on 23 Feb 1989, now patented, Pat. No. US 5011691 which is a continuation-in-part of Ser. No. US -232630 , said Ser. No. US -810560 which is a continuation of Ser. No. US 1991-660162, filed on 22 Feb 1991, now abandoned which is a continuation of Ser. No. US 1989-422699, filed on 17 Oct 1989, now abandoned which is a continuation-in-part of Ser. No. US -315342 , said Ser. No. US -569920

which is a continuation-in-part of Ser. No. US 1989-422699, filed on 17 Oct 1989 And Ser. No. US -483913 which is a continuation-in-part of Ser. No. US 1989-422613, filed on 17 Oct 1989, now patented, Pat. No. US 4975526 which is a continuation-in-part of Ser. No. US -315342 , said Ser. No. US -600024 which is a continuation-in-part of Ser. No. US -569920 , said Ser. No. US -599543 which is a continuation-in-part of Ser. No. US -569920 , said Ser. No. US -616374 which is a division of Ser. No. US -422613

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Loring, Susan A.
LEGAL REPRESENTATIVE: Testa, Hurwitz & Thibeault, LLP
NUMBER OF CLAIMS: 16
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 80 Drawing Figure(s); 49 Drawing Page(s)
LINE COUNT: 4132
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Disclosed are (1) osteogenic devices comprising a matrix containing substantially pure natural-sourced mammalian osteogenic protein; (2) DNA and amino acid sequences for novel polypeptide chains useful as subunits of dimeric osteogenic proteins; (3) vectors carrying sequences encoding these novel polypeptide chains and host cells transfected with these vectors; (4) methods of producing these polypeptide chains using recombinant DNA technology; (5) antibodies specific for these novel polypeptide chains; (6) osteogenic devices comprising these recombinantly produced proteins in association with an appropriate carrier matrix; and (7) methods of using the osteogenic devices to mimic the natural course of endochondral bone **formation** in mammals.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 30 OF 40 USPATFULL on STN
ACCESSION NUMBER: 97:120591 USPATFULL
TITLE: Compositions comprising bone morphogenic proteins and truncated parathyroid hormone related peptide, and methods of inducing cartilage by administration of same
INVENTOR(S): Hattersley, Gary, Cambridge, MA, United States
Rosen, Vicki A., Chestnut Hill, MA, United States
PATENT ASSIGNEE(S): Genetics Institute, Inc., Cambridge, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5700774		19971223	<--
APPLICATION INFO.:	US 1996-622101		19960326	(8)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Fitzgerald, David L.
ASSISTANT EXAMINER: Kemmerer, Elizabeth C.
LEGAL REPRESENTATIVE: Meinert, M. C., Lazar, S.
NUMBER OF CLAIMS: 17
EXEMPLARY CLAIM: 1
LINE COUNT: 668
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Compositions of proteins with chondrocyte and cartilaginous tissue inducing activity, as well as method of using those compositions, are disclosed. The compositions comprise one or more proteins of the **transforming growth** factor-β (TGF-β)

superfamily of proteins, particularly bone morphogenetic proteins (BMPs), in combination with parathyroid hormone related polypeptide (PTHrP) or an equivalent PTH-like polypeptide. The compositions and methods are useful in the treatment of osteoarthritis, cartilage defects and in related tissue repair.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 31 OF 40 USPATFULL on STN
ACCESSION NUMBER: 97:120112 USPATFULL
TITLE: Tissue-engineered bone repair using cultured periosteal cells
INVENTOR(S): Breitbart, Arnold S., Great Neck, NY, United States
Grande, Daniel A., Sea Cliff, NY, United States
PATENT ASSIGNEE(S): North Shore University Hospital Research Corporation, Manhasset, NY, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5700289		19971223	<--
APPLICATION INFO.:	US 1995-545988		19951020	(8)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Brittingham, Debra S.
LEGAL REPRESENTATIVE: Arnall Golden & Gregory, LLP
NUMBER OF CLAIMS: 15
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 6 Drawing Figure(s); 3 Drawing Page(s)
LINE COUNT: 856
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Periosteal cells have been **grown** in cell culture and have been shown to have an osteoblastic phenotype, with production of osteocalcin and glycosaminoglycan. When seeded into polymeric implants, repair of critical size cranial defects was demonstrated and was confirmed by histology, biochemical assays, and radiodensitometry.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 32 OF 40 USPATFULL on STN
ACCESSION NUMBER: 97:90970 USPATFULL
TITLE: Terminally sterilized osteogenic devices and preparation thereof
INVENTOR(S): Tucker, Marjorie M., Holliston, MA, United States
Rueger, David C., Southborough, MA, United States
Sampath, Kuber T., Holliston, MA, United States
PATENT ASSIGNEE(S): Stryker Corporation, Kalamazoo, MI, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5674292		19971007	<--
APPLICATION INFO.:	US 1995-478452		19950607	(8)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Kulkosky, Peter F.
LEGAL REPRESENTATIVE: Testa, Hurwitz & Thibeault, LLP
NUMBER OF CLAIMS: 23
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 1 Drawing Figure(s); 1 Drawing Page(s)
LINE COUNT: 1423

AB Disclosed are terminally sterilized osteogenic devices for implantation into a mammal. The devices contain a combination of a biologically active osteogenic protein and an insoluble carrier which after being combined are sterilized by exposure to ionizing radiation, for example, by exposure to gamma rays or an electron beam. The terminally sterilized devices of the invention are characterized in that they **induce bone formation** following implantation into a mammal. Also disclosed is a method for **inducing bone formation** in a mammal by implanting a terminally sterilized device of the invention into a preselected locus in a mammal. Also disclosed is a method for preparing the terminally sterilized device of the invention.

L17 ANSWER 33 OF 40 USPATFULL on STN
ACCESSION NUMBER: 97:35731 USPATFULL
TITLE: Prosthetic articular cartilage
INVENTOR(S): Stone, Kevin R., Mill Valley, CA, United States
Li, Shu-Tung, Oakland, NJ, United States
PATENT ASSIGNEE(S): ReGen Biologics, Inc., Redwood City, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5624463		19970429	<--
APPLICATION INFO.:	US 1994-232743		19940425 (8)	

RELATED APPLN. INFO.: Continuation of Ser. No. US 1991-809003, filed on 17 Dec 1991 which is a continuation-in-part of Ser. No. US 1990-520027, filed on 7 May 1990 which is a continuation-in-part of Ser. No. US 1989-317851, filed on 2 Mar 1989 which is a continuation-in-part of Ser. No. US 1987-75352, filed on 20 Jul 1987
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Isabella, David
LEGAL REPRESENTATIVE: Fish & Richardson P.C.
NUMBER OF CLAIMS: 22
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 12 Drawing Figure(s); 5 Drawing Page(s)
LINE COUNT: 962
AB A prosthetic, resorbable articular cartilage and methods of its fabrication and insertion are disclosed. The prosthetic articular cartilage, when implanted in a humanoid joint, acts as a resorbable scaffold for **ingrowth** of native articular chondrocytes and supports natural articulating joint forces. The prosthetic articular cartilage is a dry, porous, volume matrix of biocompatible and bioresorbable fibers. These fibers include a natural polymer or analogs thereof, at least a portion of which may be crosslinked. The matrix is adapted to have an in vivo outer surface contour substantially the same as that of natural articular cartilage in an articulating joint, and has a pore size in the approximate range of about 100 microns to about 400 microns.

L17 ANSWER 34 OF 40 USPATFULL on STN
ACCESSION NUMBER: 95:103607 USPATFULL
TITLE: Antibodies to osteogenic proteins
INVENTOR(S): Oppermann, Hermann, Medway, MA, United States
Ozkaynak, Engin, Milford, MA, United States
Kuberasampath, Thangavel, Medway, MA, United States

	Rueger, David C., Hopkinton, MA, United States
PATENT ASSIGNEE(S):	Stryker Corporation, Kalamazoo, MI, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5468845		19951121	<--
APPLICATION INFO.:	US 1993-147023		19931101 (8)	

RELATED APPLN. INFO.: Division of Ser. No. US 1992-841646, filed on 21 Feb 1992, now patented, Pat. No. US 5266683 which is a continuation-in-part of Ser. No. US 1992-827052, filed on 28 Jan 1992, now patented, Pat. No. US 5250302 Ser. No. Ser. No. US 1990-579865, filed on 7 Sep 1990, now patented, Pat. No. US 5108153 Ser. No. Ser. No. US 1990-621849, filed on 4 Dec 1990, now abandoned Ser. No. Ser. No. US 1990-621988, filed on 4 Dec 1990, now abandoned Ser. No. Ser. No. US 1991-810560, filed on 20 Dec 1991, now abandoned Ser. No. Ser. No. US 1990-569920, filed on 20 Aug 1990, now abandoned Ser. No. Ser. No. US 1990-600024, filed on 18 Oct 1990, now abandoned Ser. No. Ser. No. US 1990-599543, filed on 18 Oct 1990, now abandoned Ser. No. Ser. No. US 1990-616374, filed on 21 Nov 1990, now patented, Pat. No. US 5162114 And Ser. No. US 1990-483913, filed on 22 Feb 1990, now patented, Pat. No. US 5171594 , said Ser. No. US -827052 which is a division of Ser. No. US 1988-179406, filed on 8 Apr 1988, now patented, Pat. No. US 4968590 , said Ser. No. US 1990-579865, filed on 7 Sep 1990, now patented, Pat. No. US 5108153 which is a division of Ser. No. US -179406 , said Ser. No. US -621849 which is a division of Ser. No. US 1988-232630, filed on 15 Aug 1988, now abandoned which is a continuation-in-part of Ser. No. US -179406 , said Ser. No. US -621988 which is a division of Ser. No. US 1989-315342, filed on 23 Feb 1989, now patented, Pat. No. US 5011691 which is a continuation-in-part of Ser. No. US -232630 , said Ser. No. US -810560 which is a continuation of Ser. No. US 1991-660162, filed on 22 Feb 1991, now abandoned which is a continuation of Ser. No. US 1989-422699, filed on 17 Oct 1989, now abandoned which is a continuation-in-part of Ser. No. US -315342 , said Ser. No. US -569920 which is a continuation-in-part of Ser. No. US -422699 And Ser. No. US -483913 which is a continuation-in-part of Ser. No. US 1989-422613, filed on 17 Oct 1989, now patented, Pat. No. US 4975526 which is a continuation-in-part of Ser. No. US -315342 , said Ser. No. US 1990-600024, filed on 18 Oct 1990, now abandoned which is a continuation-in-part of Ser. No. US -569920 , said Ser. No. US -599543 , said Ser. No. US -599543

DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Lacey, David L.
ASSISTANT EXAMINER:	Loring, Susan A.
LEGAL REPRESENTATIVE:	Testa, Hurwitz & Thibeault
NUMBER OF CLAIMS:	5
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	80 Drawing Figure(s); 49 Drawing Page(s)
LINE COUNT:	4082

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Disclosed are (1) osteogenic devices comprising a matrix containing substantially pure natural-sourced mammalian osteogenic protein; (2) DNA and amino acid sequences for novel polypeptide chains useful as subunits of dimeric osteogenic proteins; (3) vectors carrying sequences encoding these novel polypeptide chains and host cells transfected with these vectors; (4) methods of producing these polypeptide chains using recombinant DNA technology; (5) antibodies specific for these novel polypeptide chains; (6) osteogenic devices comprising these recombinantly produced proteins in association with an appropriate carrier matrix; and (7) methods of using the osteogenic devices to mimic the natural course of endochondral bone **formation** in mammals.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 35 OF 40 USPATFULL on STN

ACCESSION NUMBER: 94:88501 USPATFULL

TITLE: Osteogenic devices

INVENTOR(S): Oppermann, Hermann, Medway, MA, United States
Ozkaynak, Engin, Milford, MA, United States
Kuberasampath, Thangavel, Medway, MA, United States
Rueger, David C., Hopkinton, MA, United States
Pang, Roy H. L., Medway, MA, United States

PATENT ASSIGNEE(S): Stryker Corporation, Kalamazoo, MI, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5354557		19941011	<--
APPLICATION INFO.:	US 1992-993387		19921218 (7)	

DISCLAIMER DATE: 20080430

RELATED APPLN. INFO.: Division of Ser. No. US 1992-841646, filed on 21 Feb 1992, now patented, Pat. No. US 5266683 which is a continuation-in-part of Ser. No. US 1992-827052, filed on 28 Jan 1992, now patented, Pat. No. US 5250302 which is a division of Ser. No. US 1988-179406, filed on 8 Apr 1988, now patented, Pat. No. US 4968590 And a continuation-in-part of Ser. No. US 1990-579865, filed on 7 Sep 1990, now patented, Pat. No. US 5108753 which is a division of Ser. No. US 1988-179406, filed on 8 Apr 1988, now patented, Pat. No. US 4968590 And a continuation-in-part of Ser. No. US 1990-621849, filed on 4 Dec 1990, now abandoned which is a division of Ser. No. US 1988-232630, filed on 15 Aug 1988 which is a continuation-in-part of Ser. No. US 1988-179406, filed on 8 Apr 1988, now patented, Pat. No. US 4968590 And a continuation-in-part of Ser. No. US 1990-621988, filed on 4 Dec 1990 which is a division of Ser. No. US 1989-315342, filed on 23 Feb 1989, now patented, Pat. No. US 5011691 which is a continuation-in-part of Ser. No. US 1988-232630, filed on 15 Aug 1988 And a continuation-in-part of Ser. No. US 1991-810560, filed on 20 Dec 1991, now abandoned which is a continuation of Ser. No. US 1991-660162, filed on 22 Feb 1991 which is a continuation of Ser. No. US 1989-422699, filed on 17 Oct 1989 which is a continuation-in-part of Ser. No. US 1989-315342, filed on 23 Feb 1989, now patented, Pat. No. US 5011691 And a continuation-in-part of Ser. No. US 1990-569920, filed on 20 Aug 1990, now abandoned which is a continuation-in-part of Ser. No. US

1989-422699, filed on 17 Oct 1989 which is a continuation-in-part of Ser. No. US 1990-483913, filed on 22 Feb 1990, now patented, Pat. No. US 5171574 which is a continuation-in-part of Ser. No. US 1989-422613, filed on 17 Oct 1989, now patented, Pat. No. US 4975526 which is a continuation-in-part of Ser. No. US 1989-315342, filed on 23 Feb 1989, now patented, Pat. No. US 5011691 And a continuation-in-part of Ser. No. US 1990-569920, filed on 20 Aug 1990, now abandoned which is a continuation-in-part of Ser. No. US 1989-422699, filed on 17 Oct 1989 which is a continuation-in-part of Ser. No. US 1990-483913, filed on 22 Feb 1990, now patented, Pat. No. US 5171574 which is a continuation-in-part of Ser. No. US 1989-422613, filed on 17 Oct 1989, now patented, Pat. No. US 4975526 which is a continuation-in-part of Ser. No. US 1989-315342, filed on 23 Feb 1989, now patented, Pat. No. US 5011691 And a continuation-in-part of Ser. No. US 1990-600024, filed on 18 Oct 1990, now abandoned which is a continuation-in-part of Ser. No. US 1990-569920, filed on 20 Aug 1990, now abandoned And a continuation-in-part of Ser. No. US 1990-599543, filed on 18 Oct 1990, now abandoned which is a continuation-in-part of Ser. No. US 1990-569920, filed on 20 Aug 1990, now abandoned And a continuation-in-part of Ser. No. US 1990-616374, filed on 21 Nov 1990, now patented, Pat. No. US 5162114 which is a division of Ser. No. US 1989-422613, filed on 17 Oct 1989, now patented, Pat. No. US 4975526 And a continuation-in-part of Ser. No. US 1990-483913, filed on 22 Feb 1990, now patented, Pat. No. US 5171574

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Nutter, Nathan M.
LEGAL REPRESENTATIVE: Testa, Hurwitz & Thibeault
NUMBER OF CLAIMS: 58
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 80 Drawing Figure(s); 47 Drawing Page(s)
LINE COUNT: 4211
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Disclosed are (1) osteogenic devices comprising a matrix containing substantially pure natural-sourced mammalian osteogenic protein; (2) DNA and amino acid sequences for novel polypeptide chains useful as subunits of dimeric osteogenic proteins; (3) vectors carrying sequences encoding these novel polypeptide chains and host cells transfected with these vectors; (4) methods of producing these polypeptide chains using recombinant DNA technology; (5) antibodies specific for these novel polypeptide chains; (6) osteogenic devices comprising these recombinantly produced proteins in association with an appropriate carrier matrix; and (7) methods of using the osteogenic devices to mimic the natural course of endochondral bone **formation** in mammals.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 36 OF 40 USPATFULL on STN
ACCESSION NUMBER: 94:35189 USPATFULL
TITLE: Prosthetic articular cartilage
INVENTOR(S): Stone, Kevin R., Mill Valley, CA, United States
Li, Shu-Tung, Oakland, NJ, United States
PATENT ASSIGNEE(S): ReGen Corporation, San Francisco, CA, United States

(U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5306311		19940426	<--
APPLICATION INFO.:	US 1991-809003		19911217	(7)

DISCLAIMER DATE: 20080416
RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1990-520027, filed on 19 May 1990 which is a continuation-in-part of Ser. No. US 1989-317951, filed on 2 Mar 1989, now patented, Pat. No. US 5007934 which is a continuation-in-part of Ser. No. US 1987-75352, filed on 20 Jul 1987, now patented, Pat. No. US 4880429
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Isabella, David
LEGAL REPRESENTATIVE: Lappin & Kusmer
NUMBER OF CLAIMS: 27
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 12 Drawing Figure(s); 6 Drawing Page(s)
LINE COUNT: 955

AB A prosthetic, resorbable articular cartilage and methods of its fabrication and insertion are disclosed. The prosthetic articular cartilage, when implanted in a humanoid joint, acts as a resorbable scaffold for **ingrowth** of native articular chondrocytes and supports natural articulating joint forces. The prosthetic articular cartilage is a dry, porous, volume matrix of biocompatible and bioresorbable fibers. These fibers include a natural polymer or analogs thereof, at least a portion of which may be crosslinked. The matrix is adapted to have an in vivo outer surface contour substantially the same as that of natural articular cartilage in an articulating joint, and has a pore size in the approximate range of about 100 microns to about 400 microns.

L17 ANSWER 37 OF 40 USPATFULL on STN
ACCESSION NUMBER: 93:100856 USPATFULL
TITLE: Osteogenic proteins
INVENTOR(S): Oppermann, Hermann, Medway, MA, United States
Ozkaynak, Engin, Milford, MA, United States
Kuberasampath, Thangavel, Medway, MA, United States
Rueger, David C., Hopkinton, MA, United States
Pang, Roy H. L., Medway, MA, United States
PATENT ASSIGNEE(S): Stryker Corporation, Kalamazoo, MI, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5266683		19931130	<--
APPLICATION INFO.:	US 1992-841646		19920221	(7)

DISCLAIMER DATE: 20101102
RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1992-827052, filed on 28 Jan 1992, now patented, Pat. No. US 5250302 Ser. No. Ser. No. US 1990-579865, filed on 7 Oct 1990, now patented, Pat. No. US 5108753 Ser. No. Ser. No. US 1990-621849, filed on 4 Dec 1990, now abandoned Ser. No. Ser. No. US 1990-621988, filed on 4 Dec 1990, now abandoned Ser. No. Ser. No. US 1991-810560, filed on 20 Dec 1991, now abandoned Ser. No. Ser. No. US 1990-569920, filed on 20 Aug 1990, now abandoned Ser.

No. Ser. No. US 1990-600024, filed on 18 Oct 1990, now abandoned Ser. No. Ser. No. US 1990-599543, filed on 18 Oct 1990, now abandoned Ser. No. Ser. No. US 1990-616374, filed on 21 Nov 1990, now patented, Pat. No. US 5162114 And Ser. No. US 1990-483913, filed on 22 Feb 1990, now patented, Pat. No. US 5171574 , said Ser. No. 827052 which is a division of Ser. No. US 1988-179406, filed on 8 Apr 1988, now patented, Pat. No. US 4968590 , said Ser. No. 579865 which is a division of Ser. No. 179406 , said Ser. No. 621849 which is a division of Ser. No. US 1988-232630, filed on 15 Aug 1988, now abandoned which is a continuation-in-part of Ser. No. 179406 , said Ser. No. 621988 which is a division of Ser. No. US 1989-315342, filed on 23 Feb 1989, now patented, Pat. No. US 5011691 which is a continuation-in-part of Ser. No. 232630 , said Ser. No. 810560 which is a continuation of Ser. No. US 1991-660162, filed on 22 Feb 1991, now abandoned which is a continuation of Ser. No. US 1989-422699, filed on 17 Oct 1989, now abandoned which is a continuation-in-part of Ser. No. 315342 , said Ser. No. 569920 which is a continuation-in-part of Ser. No. 422699 And Ser. No. 483913 which is a continuation-in-part of Ser. No. US 1989-422613, filed on 17 Oct 1989, now patented, Pat. No. US 4975526 which is a continuation-in-part of Ser. No. 315342 , said Ser. No. 600024 which is a continuation-in-part of Ser. No. 569920 , said Ser. No. 599543 which is a continuation-in-part of Ser. No. 569920 which is a continuation-in-part of Ser. No. 569920

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Nutter, Nathan M.
LEGAL REPRESENTATIVE: Testa, Hurwitz & Thibeault
NUMBER OF CLAIMS: 58
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 76 Drawing Figure(s); 47 Drawing Page(s)
LINE COUNT: 4144
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Disclosed are (1) osteogenic devices comprising a matrix containing substantially pure natural-sourced mammalian osteogenic protein; (2) DNA and amino acid sequences for novel polypeptide chains useful as subunits of dimeric osteogenic proteins; (3) vectors carrying sequences encoding these novel polypeptide chains and host cells transfected with these vectors; (4) methods of producing these polypeptide chains using recombinant DNA technology; (5) antibodies specific for these novel polypeptide chains; (6) osteogenic devices comprising these recombinantly produced proteins in association with an appropriate carrier matrix; and (7) methods of using the osteogenic devices to mimic the natural course of endochondral bone **formation** in mammals.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 38 OF 40 USPATFULL on STN
ACCESSION NUMBER: 93:97929 USPATFULL
TITLE: Prosthetic ligaments
INVENTOR(S): Li, Shu-Tung, Oakland, NJ, United States
Stone, Kevin R., Mill Valley, CA, United States
PATENT ASSIGNEE(S): ReGen Biologics, Inc., San Francisco, CA, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 5263984		19931123	<--
APPLICATION INFO.:	US 1992-872636		19920422 (7)	

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1990-582516, filed on 13 Sep 1990, now patented, Pat. No. US 5116374 which is a division of Ser. No. US 1989-317951, filed on 2 Mar 1989, now patented, Pat. No. US 5007934, issued on 16 Apr 1991 which is a continuation-in-part of Ser. No. US 1987-75352, filed on 20 Jul 1987, now patented, Pat. No. US 4880429, issued on 14 Nov 1989

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Isabella, David
LEGAL REPRESENTATIVE: Lahive & Cockfield
NUMBER OF CLAIMS: 21
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 10 Drawing Figure(s); 4 Drawing Page(s)
LINE COUNT: 755

AB Disclosed is a prosthetic ligament comprising a Plurality of substantially aligned, elongated filaments. Each filament is a dry, porous, volume matrix of biocompatible and bioresorbable fibrils, at least some of which are crosslinked. The fibrils are short segments of longer fibers of polymeric connective tissue components, or analogs thereof. Each filament establishes a bioresorbable scaffold adapted for **ingrowth** of ligament fibroblasts, the scaffold and the **ingrown** fibroblasts supporting natural ligament tensile forces. Also disclosed are methods of fabricating the prosthetic ligament, and methods of regenerating ligamentous tissue in vivo.

L17 ANSWER 39 OF 40 USPATFULL on STN
ACCESSION NUMBER: 84:66147 USPATFULL
TITLE: Bone-equivalent and method for preparation thereof
INVENTOR(S): Bell, Eugene, Dedham, MA, United States
PATENT ASSIGNEE(S): Massachusetts Institute of Technology, Cambridge, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 4485097		19841127	<--
APPLICATION INFO.:	US 1983-497984		19830525 (6)	

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1982-381978, filed on 26 May 1982 which is a continuation-in-part of Ser. No. US 1982-352586, filed on 26 Feb 1982, now abandoned which is a continuation-in-part of Ser. No. US 1981-245536, filed on 19 Mar 1981, now abandoned which is a continuation-in-part of Ser. No. US 1978-972832, filed on 26 Dec 1978, now abandoned

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Rosen, Sam
LEGAL REPRESENTATIVE: Smith, Jr., Arthur A., Brook, David E.
NUMBER OF CLAIMS: 3
EXEMPLARY CLAIM: 1,2
NUMBER OF DRAWINGS: 14 Drawing Figure(s); 7 Drawing Page(s)
LINE COUNT: 1018
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A bone-equivalent, useful in the fabrication of prostheses, is disclosed

which is prepared from a hydrated collagen lattice contracted by fibroblast cells and containing **demineralized bone** powder.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L17 ANSWER 40 OF 40 USPATFULL on STN

ACCESSION NUMBER:	84:66146 USPATFULL
TITLE:	Tissue-equivalent and method for preparation thereof
INVENTOR(S):	Bell, Eugene, Dedham, MA, United States
PATENT ASSIGNEE(S):	Massachusetts Institute of Technology, Cambridge, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 4485096		19841127	<--
APPLICATION INFO.:	US 1982-381978		19820526 (6)	

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1982-352586, filed on 26 Feb 1982, now abandoned which is a continuation-in-part of Ser. No. US 1981-245536, filed on 19 Mar 1981, now abandoned which is a continuation-in-part of Ser. No. US 1978-972832, filed on 26 Dec 1978, now abandoned

DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Rosen, Sam
LEGAL REPRESENTATIVE:	Smith, Jr., Arthur A., Brook, David E.
NUMBER OF CLAIMS:	29
EXEMPLARY CLAIM:	1,10
NUMBER OF DRAWINGS:	14 Drawing Figure(s); 7 Drawing Page(s)
LINE COUNT:	1054

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A tissue-equivalent, useful in the treatment of burns or other skin wounds and in the fabrication of prostheses, is disclosed which is prepared from a hydrated collagen lattice contracted by a contractile agent, such as fibroblast cells or blood platelets, to **form** tissue-equivalent. In one embodiment, a skin-equivalent can be fabricated by **growing** a layer of keratinocyte cells thereon. Both the keratinocyte cells and contractile agent may be derived from the potential recipient of the skin-equivalent.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.